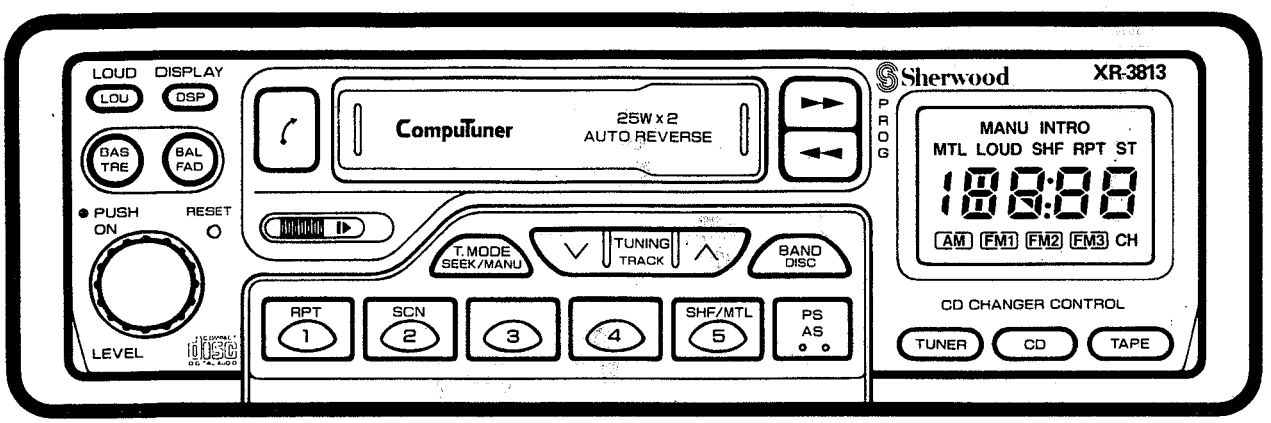
SERVICE MANUAL

XR-3813

AM/FM CASSETTE RECEIVER WITH CD CHANGER CONTROL



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Sherwood

Specification

1. Audio Section

Power Output/CH into 4 OHM 4CH	
@ 50Hz-20KHz, 0.5% THD	10 Watts
@ 1KHz, 10% THD	15 Watts
Tone Control	
Bass @ 100Hz	±10dB
Treble @ 10KHz	±±10dB

2. Tuner Section

FM Section	
Frequency Range	87.5-107.9MHz
Usable Sensitivity @ 75 ohm	2.0μV
50dB Quieting Sensitivity Stereo @ 75 ohm	20dB
S/N Ratio	
• Mono	66dB
• Stereo	64dB
Stereo Separation @ 1KHz	30dB
Channel Selectivity	65dB
Capture Ratio	4dB
Image Rejection Ratio	60dB
IF Rejection Ratio	120dB
AM Section	
Frequency Range	530-1710KHz
Usable Sensitivity @ 20dB S/N	25μV
Selectivity @ ±10KHz	45dB
Signal To Noise @ REF 30% MOD.	55dB

3. Cassette Section

Frequency Response, ±3dB	
• Metal, CrO_2	30Hz-15K
• Normal	30Hz-14KHz
Wow & Flutter (Wrms)	0.2%
S/N Ratio	60dB

4. CD Changer Section

Frequency Range	10-20,000Hz
S/N Ratio @ 1KHz IHF A Filter	90dB
Dinamic Range @ 1KHz	90dB
Distortion @ 1KHz	0.03%
Output Z=10K ohm	1.2±2Volt

5. General

Operating Voltage	DC14.4V(10.8-15.6V) Negative Ground
Speaker Impedance	4 ohms

6. Chassis Dimensions

W	178mm(7″)
H	50mm(2″)
D	165mm(6-1/5″)

7. Front Panel Dimensions

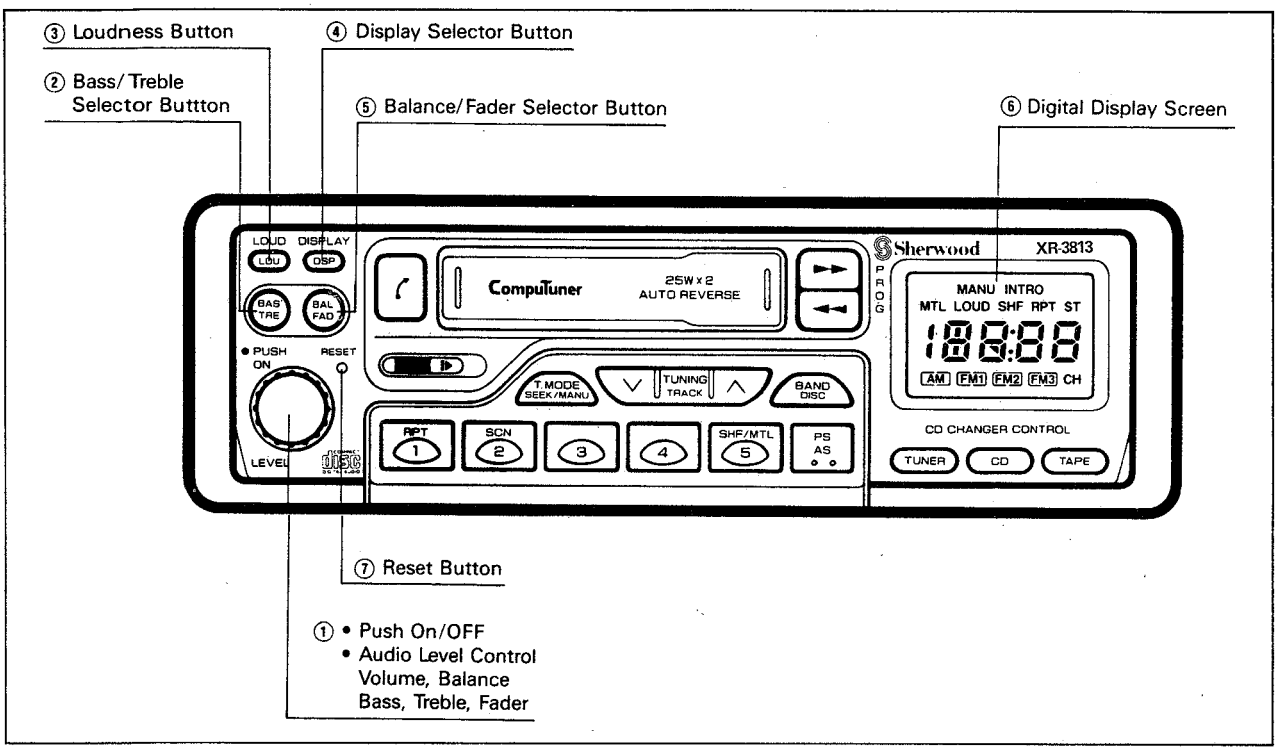
W	188mm(7-3/8″)
H	58mm(2-5/16″)
D	17.6mm(5/8″)

8. Net Weight ..... 2.5Kg(5.54 lbs)

Note: Design and specifications subject to change without notice for improvements.

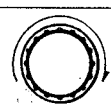
Location of Controls

1. General Section



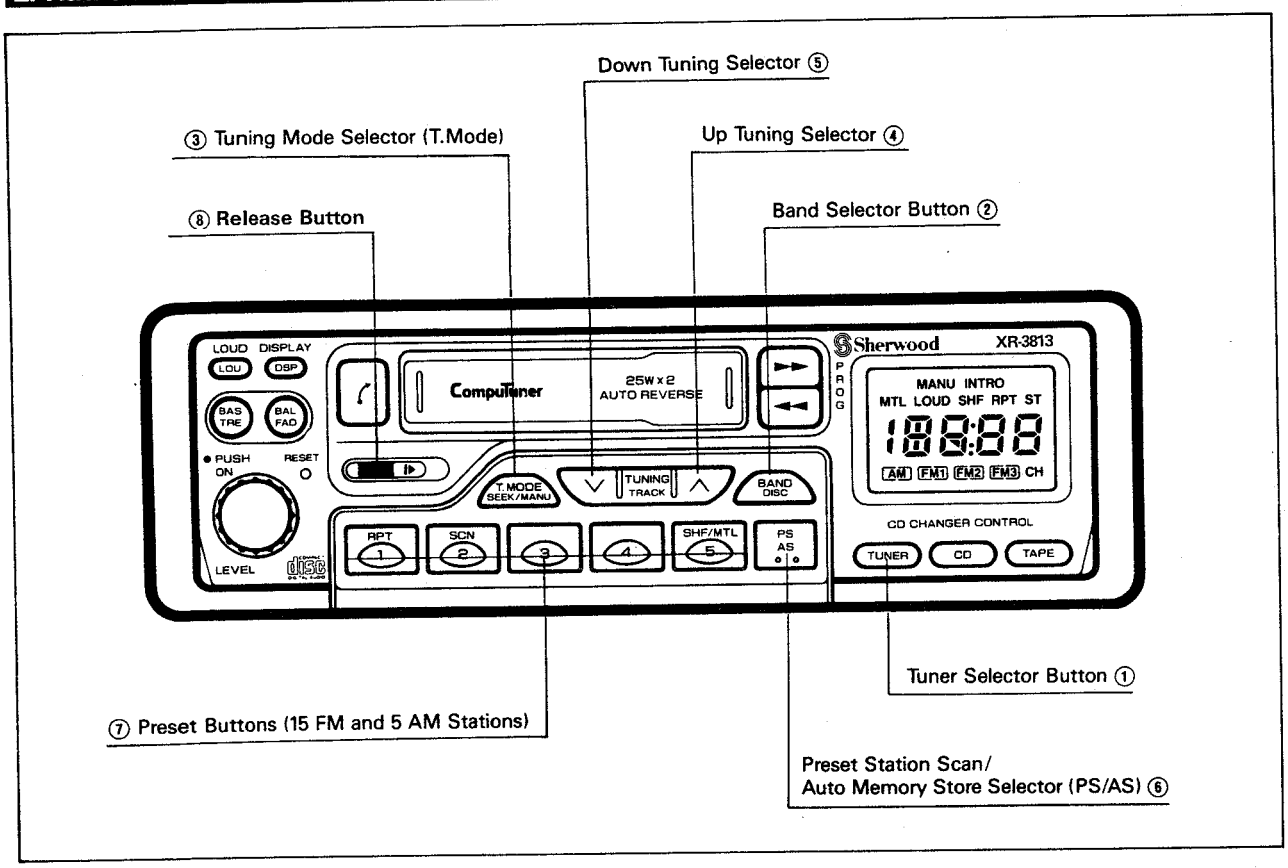
■ Audio Level Control (①, ②, ⑤)

Use this control to adjust the selected audio mode.

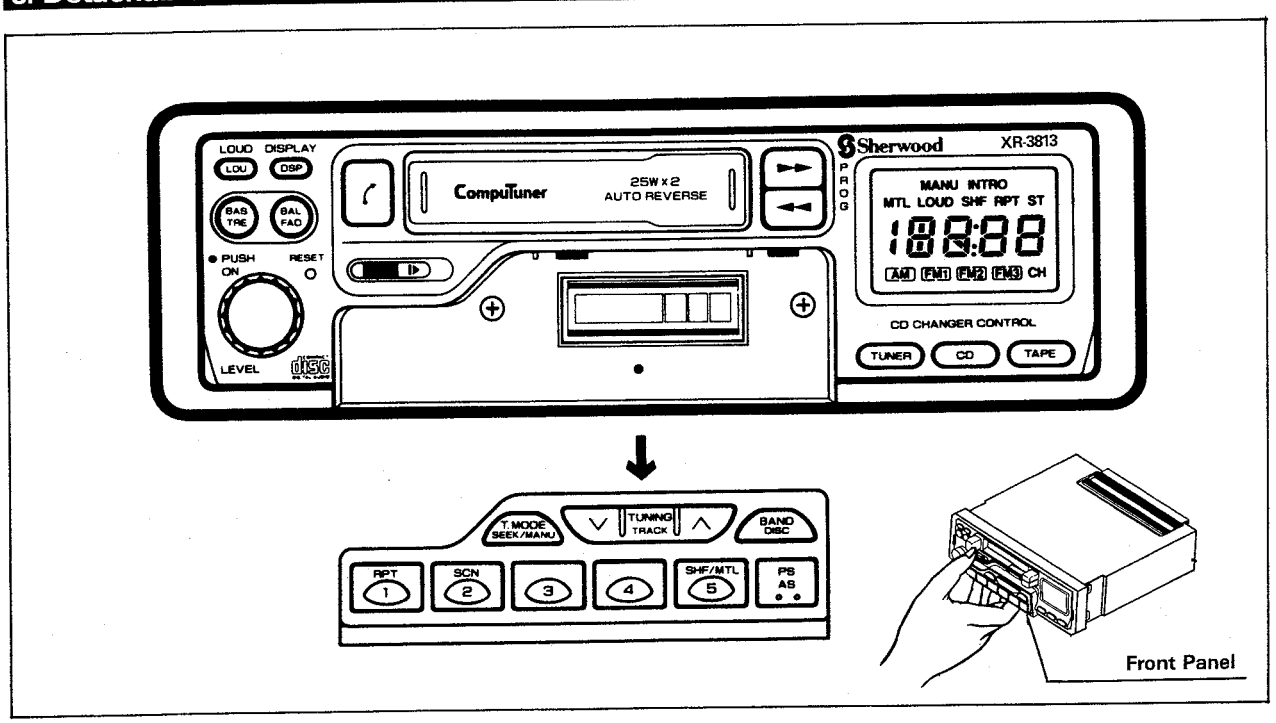
LEVEL Control / AUDIO MODE	LEVEL	Center Point	 LEVEL	Description of Operation
VOL	Vo 0		Vo33	When the volume increases, the number in the display increases, and when the volume decreases, the number in the display decreases.
BASS	BA-7	BA 0	BA 7	When the number increases from zero, the bass is increased, and when the number decreases, the bass is decreased.
TRE	TR-7	TR 0	TR 7	When the number increases from zero, the treble is increased, and when the number decreases, the treble is decreased.
BAL	BL 9 (Balance Left)	B 0	BR 9 (Balance Right)	When "BR" (Balance Right) is displayed, the sound of the right speakers is increased, and when "BL" (Balance Left) is displayed, the sound of the left speakers is increased.
FAD	FR 9 (Fader Rear)	F 0	FF 9 (Fader Front)	When "FF" (Fader Front) is displayed, the sound of the front speakers is increased, and when "FR" (Fader Rear) is displayed, the sound of the rear speakers is increased.

Note: The maximum, center and minimum values are indicated for the VOL,BASS and TRE modes. The mode switches back to the VOL mode approximately 5 seconds after adjustment in the BASS, TRE, BAL and FAD modes.

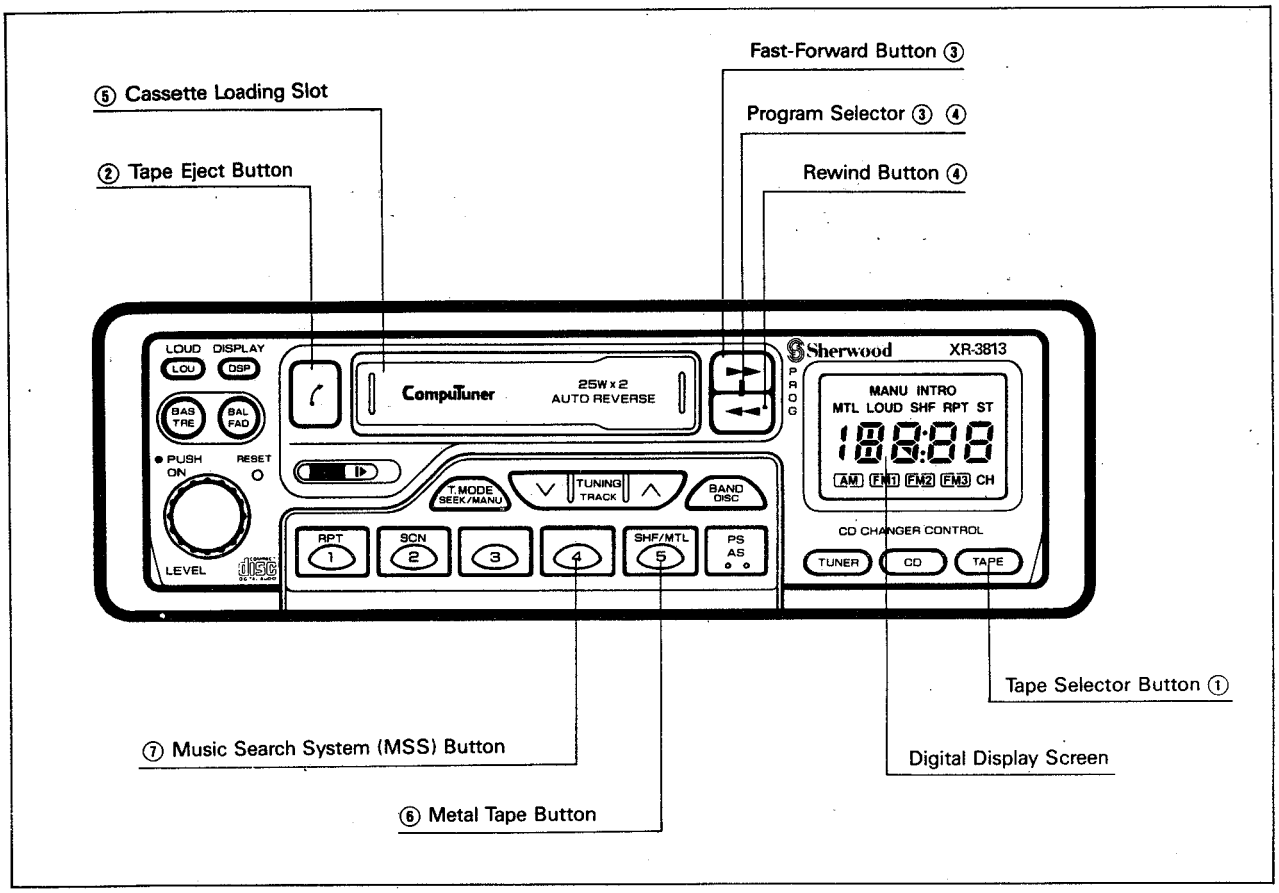
2. Radio Section

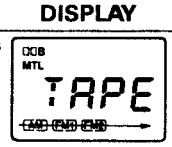
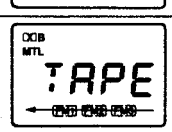


3. Detachable Front Panel Section

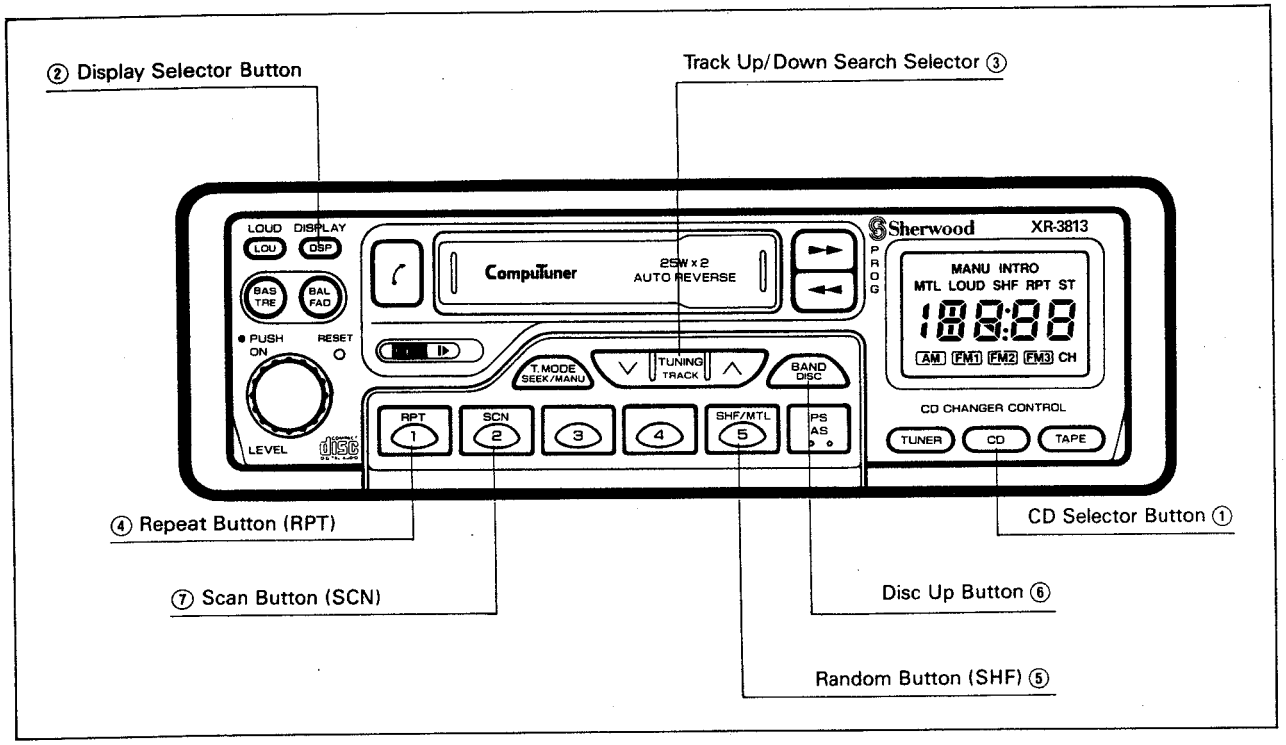


4. Cassette Tape Section



MODE	DISPLAY	EXPLANATION OF DISPLAY
TAPE PLAY (FORWARD SIDE)		Tape running indicators move to right.
TAPE PLAY (REVERSE SIDE)		Tape running indicators move to left.
TAPE FAST FORWARD		
TAPE FAST REWIND		

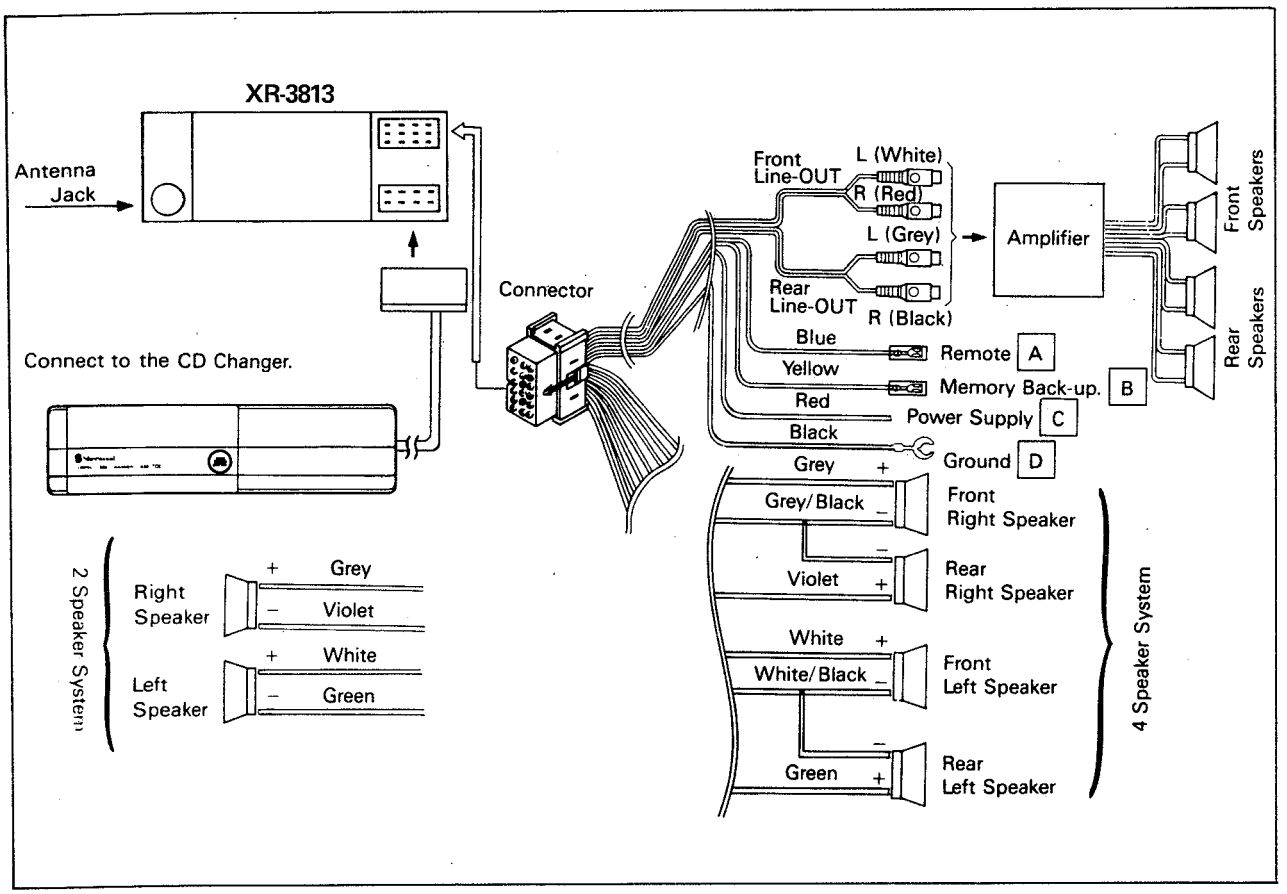
5. CD Changer Control Section



Button Number and Mode	Diplsy	Explanation of Display
Disc/Track Number	Disc number Track number 5 07	Indicators move to the right.
Play Time	2.30	
Disc Load	Lod	Display is as shown at left while disc is being loaded.
④ Repeat Play	REP	Display is as shown at left when tracks is being searched for repeat play.
Track Search	- - -	Display is as shown at left when track is being searched for.

Button Number and Mode	Display	Explanation of Display
No Magazine	no dISC	Display is as shown at left when there is no magazine in the CD auto changer.
⑤ Random Play	Rnd	Display is as shown at left when track is being searched for random play.
⑦ Scan Play	SCAN	Display is as shown at left when track is being searched for scan play.
Error	Er 1	Display shown at left is an abbreviation of error 1 and indicates mechanical trouble of the CD changer section. Press the RESET button on the auto changer side.
	Er 2	Display shown at left indicates that the CD auto changer section has become hot and that the internal protection circuit has been activated. This display will be cancelled when the CD auto changer returns to normal temperature.

6. Wire Connection



A • To remote terminal of power Amp. when using LINE OUT cords.
• To car antenna motor which is extended when the main switch of this unit turned on.

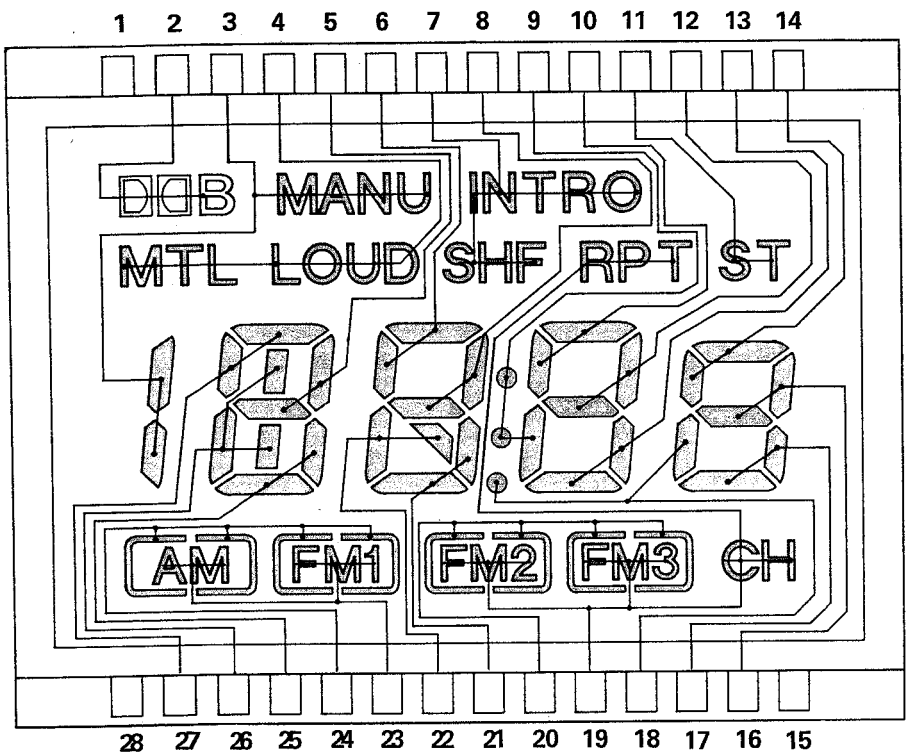
B To terminal always supplied with power regardless of ignition switch. The units memory will not function unless this wire is connected.

C To electrical terminal controlled by ignition switch (DC 12V) ON/OFF.

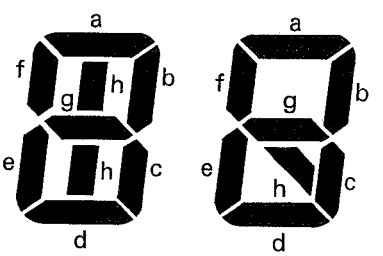
D To vehicle (Metal) body.

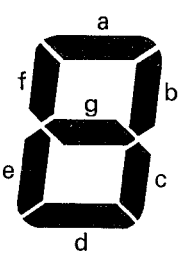
LCD Display Internal Diagram & Pin Function

1. PIN FUNCTION

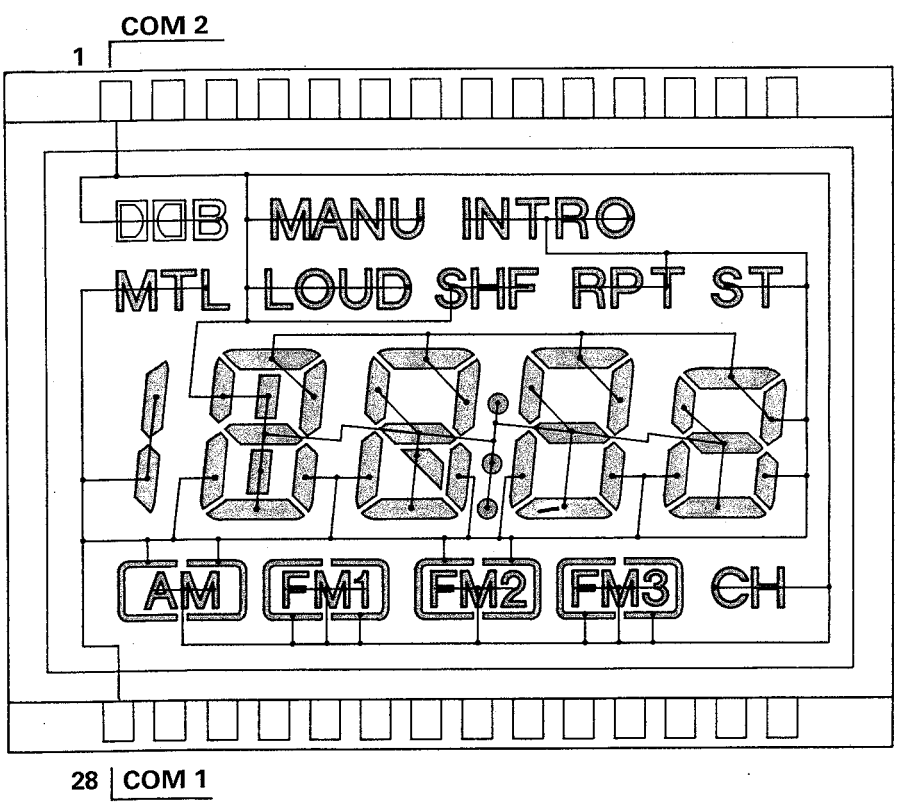


2. SEGMENT





3. COMMON



Disassembly Instructions

1. To remove the Top Cover. (Fig. 1)

1) Remove **2** screws **(A)** from the Heat Sink.
2) Pull back the Top Cover and lift in the direction shown by the arrow.

2. To remove the Bottom Cover. (Fig. 1)

1) Turn the unit up side down.
2) Remove **2** screws **(B)** from the back and side of the Bottom Cover and remove the cover by pulling the cover in the direction shown by the arrow.

3. To remove the Front Panel. (Fig. 1)

1) Detach the Detachable Control Panel from the Front Panel.
2) Detach the SUMI Card Wires from the Main P.C. Board.
3) Detach **1 Knob (C)** from the Front Panel.
4) Remove **2** screws **(D)** from the Front Panel.
5) Detach the **4** points hooks from the Main Chassis.
6) Pull back the Front Panel and lift in the direction shown by the arrow.

4. To remove the Front P.C. Board. (Fig. 1)

1) Remove **2** screws **(E)** from the Front P.C. Board.
2) Lift the board in the direction shown the arrow.

5. To remove the DECK Mechanism. (Fig. 2)

1) Remove **4** screws **(F)** from the Deck Mechanism and Main Chassis.
2) Detach the Connectors from the P.C. Boards.
3) Lift the deck in the direction shown by the arrow.

6. To remove the Main P.C. Board. (Fig. 3)

1) Remove **1 Nut** and washer from the Front Chassis.
2) Remove **5** screws **(H)** from the Main P.C. Board.
3) Pull back the Main P.C. Board and lift in the direction shown by the arrow.

7. To remove the Power P.C. Board. (Fig. 3)

1) Remove **4** screws **(I)** from the Heat Sink.
2) Detach the Connectors from the P.C. Boards.
3) Pull back the Power P.C. Board and lift in the direction shown by the arrow.

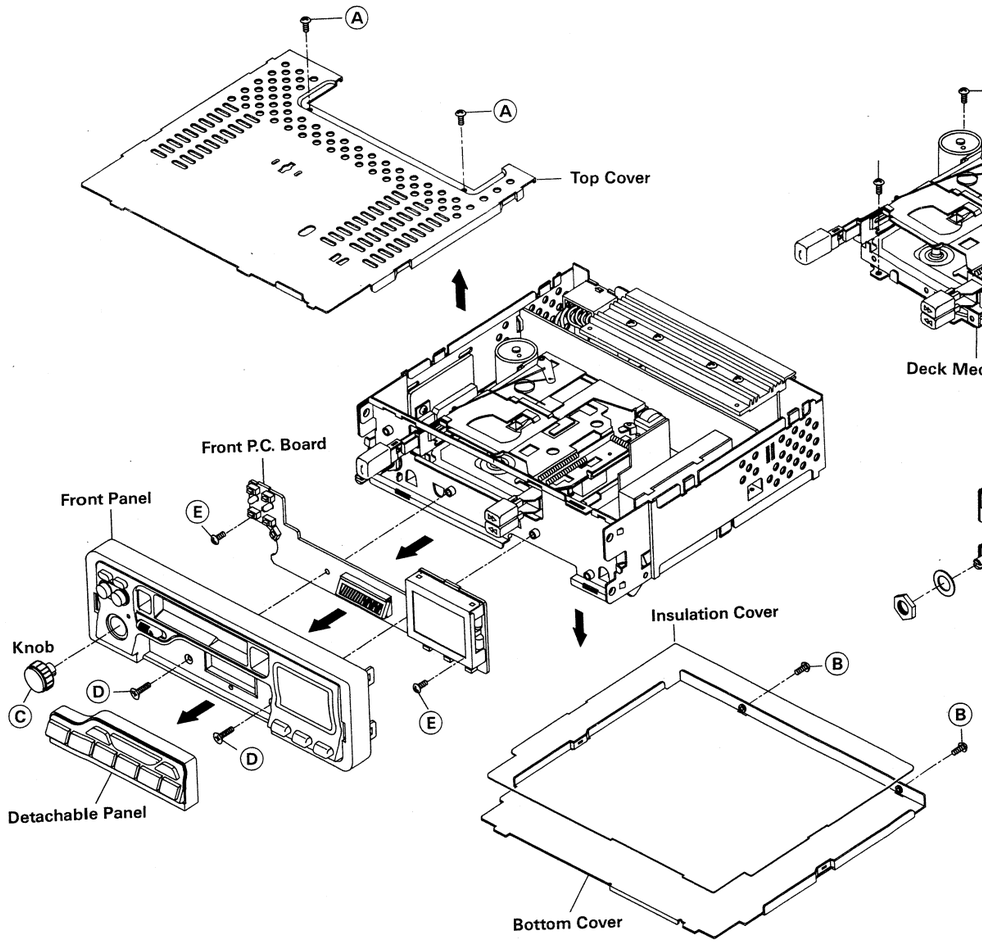


Fig. 1

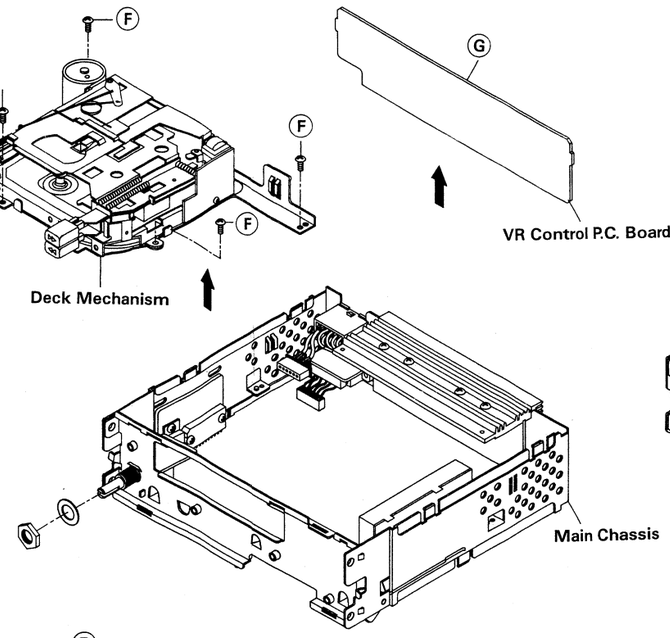


Fig. 2

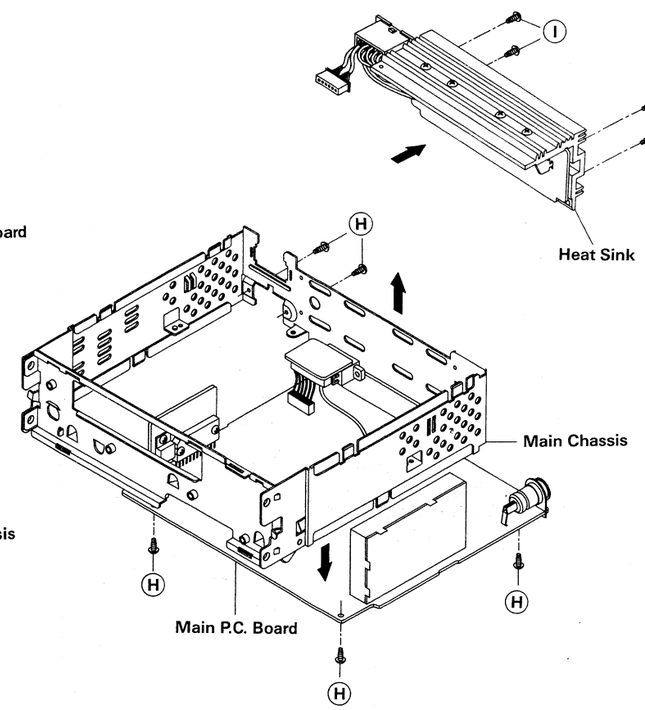
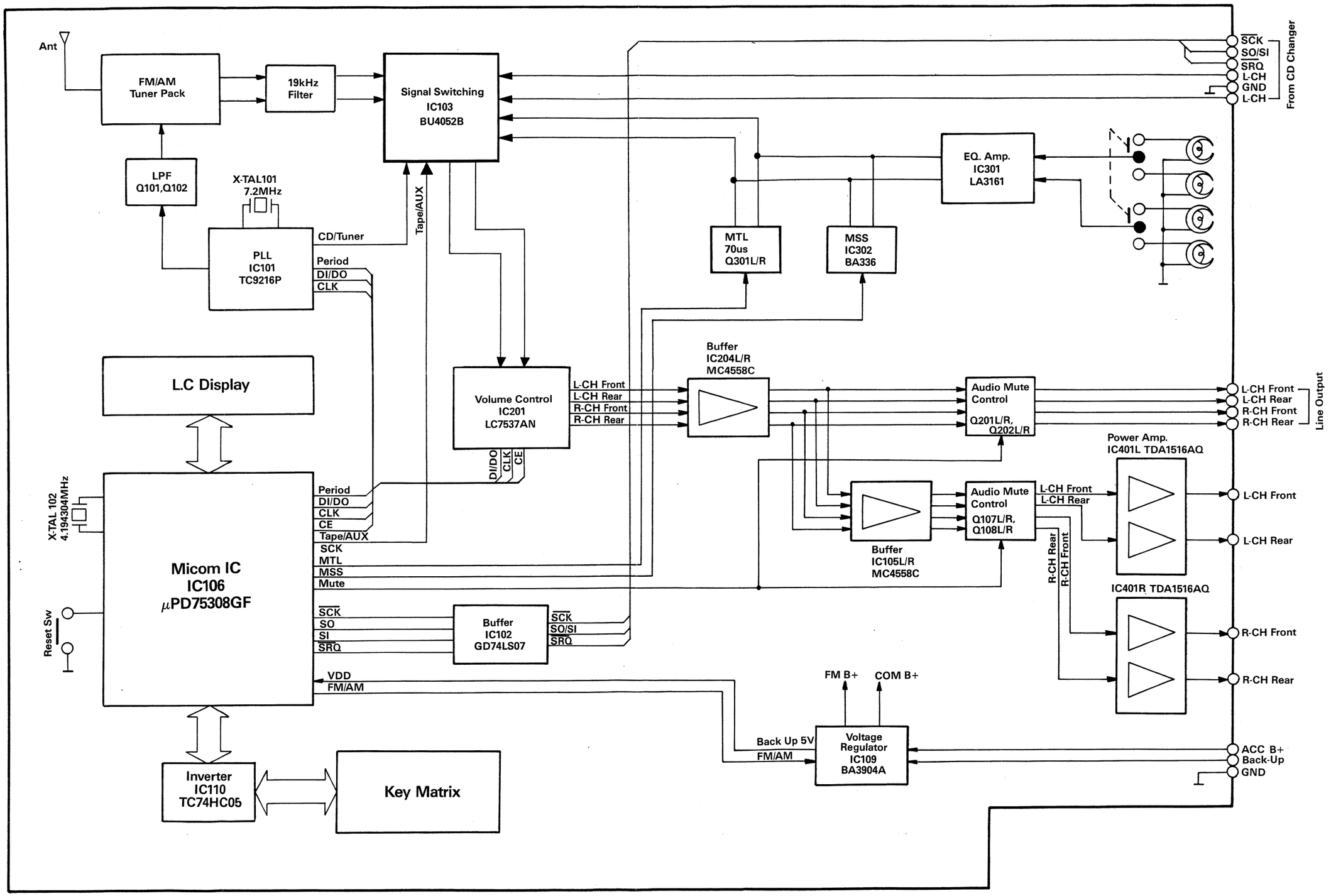


Fig. 3

Block Diagram



Alignment Instructions

Equipment Required

1. AM/FM Standard Signal Generator
2. FM IF Sweep Generator
3. Stereo Signal Generator
4. Oscilloscope
5. SSVM (Output Meter)
6. DC Power Supply
7. Frequency Counter
8. Standard Tape

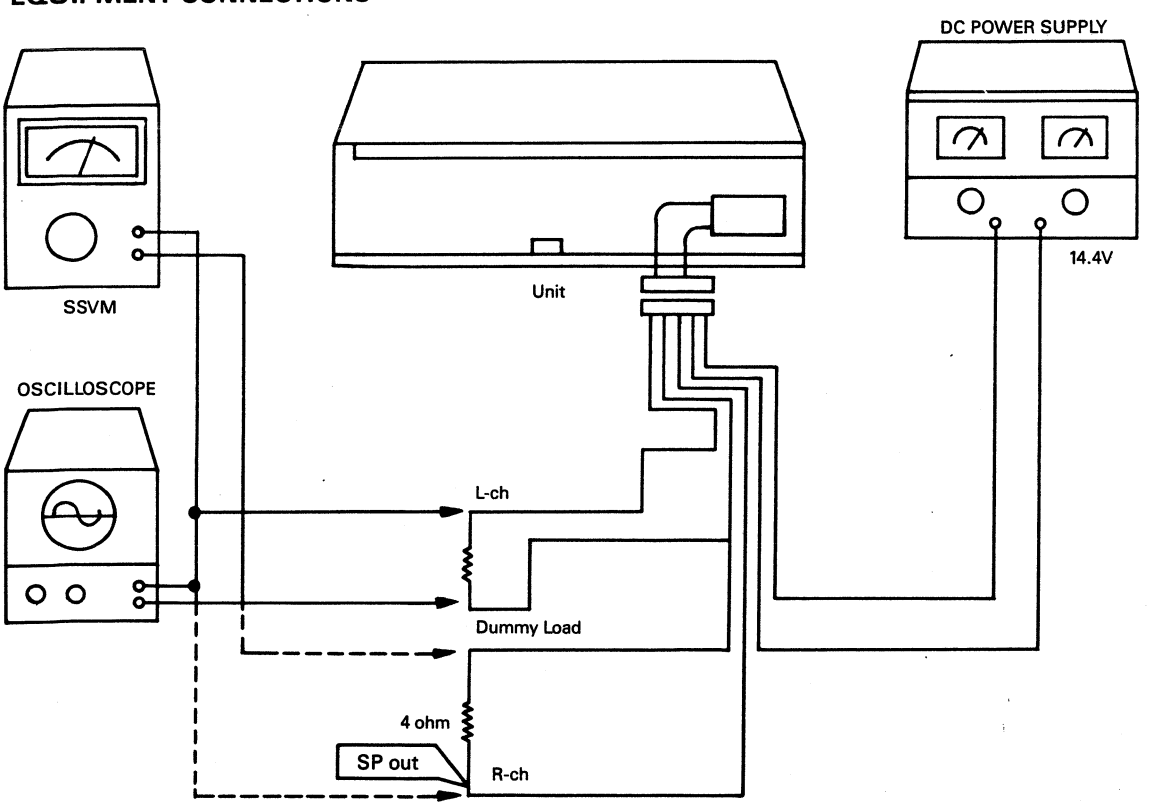
Important

1. Non-ferrous tools should be used for this alignment.
2. Signal should be kept as low as possible to avoid clipping.
3. 400Hz modulation with 30% amplitude is to be used for AM standard modulator (400Hz with 75kHz deviation for FM).
4. Output impedance of signal generator should be matched with the impedance of dummy antenna.

Tuner Alignment Pre-setting

Pre-setting of the frequency at each adjustment point will make the tuning adjustment easier.
AM Presettings are: 530kHz, 600kHz, 1000kHz, 1400kHz, 1620kHz.
FM Presettings are: 90.1MHz, 98.1MHz, 106.1MHz.

TEST EQUIPMENT CONNECTIONS



Standard Adjustment Condition

a. Power Supply ..... 14.4V DC
b. AM/FM Selector Switch ..... AM or FM
c. Tone Control ..... Flat
d. Balance Control ..... Center
e. Volume ..... Adjust to get 1.0W power output level
f. Load Impedance ..... 4 ohm
g. Equipment Connections ..... See above test equipment connection

ADJUSTMENT POINT

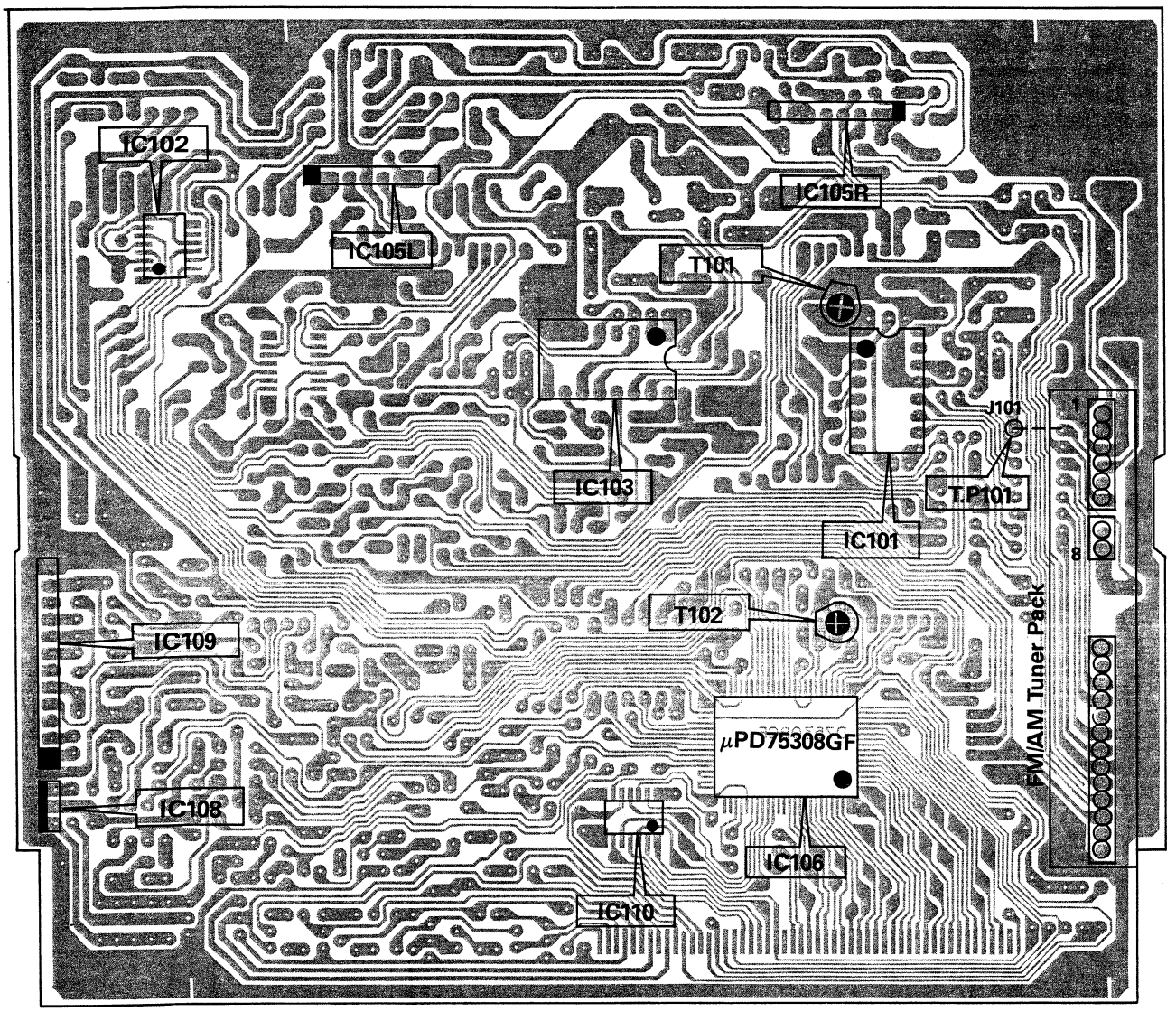


Figure 1.
Main P.C. Board Points

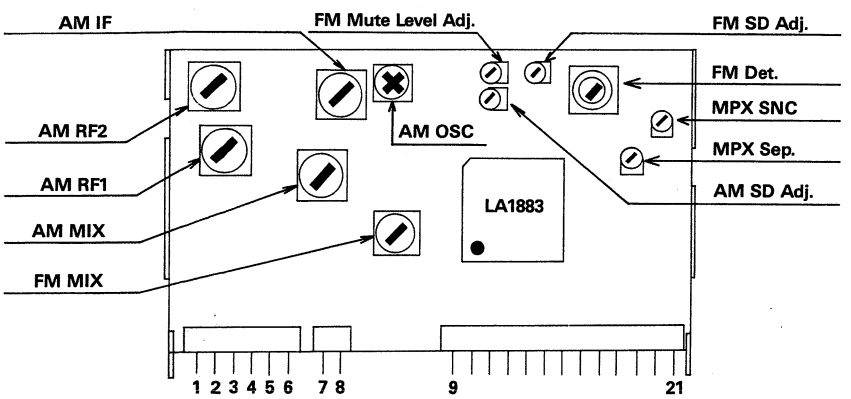


Figure 2.
AM/FM Module Pack Points

Note: Both **AM/FM** module pack are pre-adjusted at the factory. Additional adjustments will be required when some parts are changed or replaced.

Electrical Parts List

Ref. No	Part No.	Description	Position
Ass'y P.C.B Main			
• Integrated Circuits			
IC101	2168007205	TC9216P, Prescaler PLL IC	3/4B
IC102	2138001122	GD74LS07D, Hex NON-Inverted Buffers	1A
IC103	2168027019	BU4052B, Dual 4-CH Analog Multiplexer	2/3B
IC104		Not used	
IC105L/R	2168222120	BA4558N, Dual OP-Amplifier	2/3A
IC106	2138313155	μPD75308GF, LCD Control LSI	3C
IC107		Not used	
IC108	2168602103	MC78M08C, Positive Voltage Regurator	1C
IC109	2168627001	BA3904A, Reference Voltage Generator	1B/C
IC110	2108007105	TC74HC05AF, High Speed CMOS-Inverter	3C
• Transistors			
Q101,Q102	2008610103	NPN 2SD 636R R-OHM(K)	4B
Q103	2238402109	NPN KSR 1209 SAMSUNG	3B
Q104,Q105		Not used	
Q106	2208622107	NPN 2SC 1740(S) R-OHM(K)	2B
Q107L	2208606115	NPN KTD 1303 KEC	1A
Q107R	2208606115	NPN KTD 1303 KEC	3/4A
Q108L	2208606115	NPN KTD 1303 KEC	2A
Q108R	2208606115	NPN KTD 1303 KEC	4A
Q109~Q113		Not used	
Q114,Q115	2208622107	NPN 2SC 1740(S) R-OHM(K)	2C
Q116	2208222106	PNP 2SA 933(S) R-OHM(K)	2C
Q117	2238402102	NPN KSR 1202 SAMSUNG	2C
Q118	2238002105	PNP KSR 2205 SAMSUNG	1C
Q119	2238022101	PNP 2SB 1237TV R-OHM(K)	1C
Q120	2208621106	NPN DTC 114Y(S) R-OHM(K)	1C
Q121	2238022101	PNP 2SB 1237TV R-OHM(K)	1C
Q122	2008202101	PNP KSA 1220A-Y KEC	1B
Q123	2208621106	NPN DTC 114Y(S) R-OHM(K)	2C
Q124	2238402102	NPN KSR 1202 SAMSUNG	2B
Q125	2208222106	PNP 2SA 933(S) R-OHM(K)	2B
Q126	2238402109	PNP KSR 1209 SAMSUNG	2B
Q127	2238002106	PNP KSR 2206 SAMSUNG	2B
Q128	2238402109	PNP KSR 1209 SAMSUNG	2B
Q129	2238002106	PNP KSR 2206 SAMSUNG	4B
• Diodes			
D101	2058322101	Switching 1N4148(M) 60V/500mW Silicon	4B
D102	2258599107	Zener DZ-9.1BS 9.1V/500mW Silicon	2B
D103~D106	2058322101	Switching 1N4148(M) 60V/500mW Silicon	1A
D107	2058322101	Switching 1N4148(M) 60V/500mW Silicon	2B
D108	2258599104	Zener DZ-5.6BS 5.6V/500mW Silicon	2C
D109,D110		Not used	
D111	2058322101	Switching 1N4148(M) 60V/500mW Silicon	2C
D112	2058322101	Switching 1N4148(M) 60V/500mW Silicon	1B
D113	2258106100	Rectifier 1N4002 100V/1A Silicon	1A
D114,D115	2058322101	Switching 1N4148(M) 60V/500mW Silicon	1A
D116	2058322101	Switching 1N4148(M) 60V/500mW Silicon	1C
D117	2058322101	Switching 1N4148(M) 60V/500mW Silicon	1B
D118~D120	2258106100	Rectifier 1N4002 100V/1A Silicon	1B
D121	2058322101	Switching 1N4148(M) 60V/500mW Silicon	1B
D122	2058322101	Switching 1N4148(M) 60V/500mW Silicon	1C
D123	2058322101	Switching IN4148(M) 60V/500MW Silicon	3C
• Crystal			
X-TAL101	3908101031	X-TAL 7.2MHz	3A

Ref. No	Part No.	Description	Position
X-TAL101	3938201970	X-TAL 4.19MHz	3B
• Coils			
L101L/R	2648601630	Inductor Coil, 32mH	3A
• Capacitors			
C101	3479110975	Electrolytic 1 μF 50V SE M	4A/B
C102~C105	3519223520	Ceramic 0.022 μF 25V AXIAL Z	4B
C106L/R	3679222120	*Mylar 0.0022 μF 100V J	4A
C107L/R	3679222120	Mylar 0.0022 μF 100V J	3A
C108L/R	3679332120	Mylar 0.0033 μF 100V J	3A
C109	3519223520	Ceramic 0.022 μF 25V AXIAL Z	4B
C110	3479147035	Electrolytic 47 μF 16V SE M	4A
C111	3519223520	Ceramic 0.022 μF 25V AXIAL Z	4A
C112	3519150935	Ceramic 15 pF 50V AXIAL J	3A
C113	3519470935	Ceramic 47 pF 50V AXIAL J	3B
C114	3679103120	Mylar 0.01 μF 100V J	4A
C115	3479133975	Electrolytic 3.3 μF 50V SE M	4A
C116	3479147035	Electrolytic 47 μF 16V SE M	2B
C117L/R	3479110975	Electrolytic 1 μF 50V SE M	3A
C118L	3479110975	Electrolytic 1 μF 50V SE M	3A
C118R	3479110975	Electrolytic 1 μF 50V SE M	2/3A
C119	3479147035	Electrolytic 47 μF 16V SE M	3B
C120L	3479110975	Electrolytic 1 μF 50V SE M	3B
C120R	3479110975	Electrolytic 1 μF 50V SE M	2A
C121	3479147035	Electrolytic 47 μF 16V SE M	3B
C122~C129		Not used	
C130L	3479110975	Electrolytic 1 μF 50V SE M	2A
C130R	3479110975	Electrolytic 1 μF 50V SE M	1A
C131		Not used	
C132L	3479110975	Electrolytic 1 μF 50V SE M	2A
C132R	3479110975	Electrolytic 1 μF 50V SE M	4A
C133L	3479110975	Electrolytic 1 μF 50V SE M	2A
C133R	3479110975	Electrolytic 1 μF 50V SE M	4A
C134L	3479110975	Electrolytic 1 μF 50V SE M	2A
C134R	3479110975	Electrolytic 1 μF 50V SE M	4A
C135L	3479147035	Electrolytic 47 μF 16V SE M	2A
C135R	3479147035	Electrolytic 47 μF 16V SE M	3A
C136L	3479110975	Electrolytic 1 μF 50V SE M	2A
C136R	3479110975	Electrolytic 1 μF 50V SE M	3A
C137	3479147035	Electrolytic 47 μF 16V SE M	3B
C138		Not used	
C139,C140	3479133975	Electrolytic 3.3 μF 50V SE M	2C
C141	3479347139	Electrolytic 470 μF 16V SG M	1C
C142		Not used	
C143	3479347041	Electrolytic 47 μF 25V SG M	1C
C144	3479310121	Electrolytic 100 μF 10V SG M	1C
C145	3479347121	Electrolytic 470 μF 10V SG M	1B
C146	3479222971	Electrolytic 2.2 μF 50V SA M	1B/C
C147	3479310141	Electrolytic 100 μF 25V SG M	1A
C148	3519223520	Ceramic 0.022 μF 25V AXIAL Z	1A
C149	3409210233	Electrolytic 1000 μF 16V CV M	1A
C150	3519104935	Ceramic 0.1 μF 50V AXIAL J	3A
C151	3519120130	Ceramic 12 μF 50V J	3B
C152	3479110975	Electrolytic 1 μF 50V SE M	3B
TC101		Not used	
TC102	3838001010	Trimmer Capacitor, TZ03-R200FR, 20p, Red	3B
• Resistors (All Resistors are Carbon Film 1/5W J Type unless otherwise noted.)			

Ref. No	Part No.	Description	Position
R101	3069104970	100k ohm	4A
R102	3069104970	100k ohm	4B
R103	3069102970	1k ohm	4A
R104	3069473970	47k ohm	4B
R105L/R	3069332970	3.3k ohm	4A
R106	3069102970	1k ohm	4B
R107	3069102970	1k ohm	3B
R108	3069223970	22k ohm	3B
R109	3069102970	1k ohm	3B
R110	3069222970	2.2k ohm	4A
R111	3069472970	4.7k ohm	4B
R112	3069331970	330 ohm	2B
R113	3069392970	3.9k ohm	3B
R114~R116	3069102970	1k ohm	4A
R117	3069102970	1k ohm	1B
R118~R120	3069102970	1k ohm	1A
R121L/R	3069473970	47k ohm	3A
R122L/R	3069183970	18k ohm	3A
R123L/R	3069473970	47k ohm	2A
R124L/R	3069622970	6.2k ohm	2A
R125L	3069104970	100k ohm	3B
R125R	3069104970	100k ohm	3A
R126L	3069104970	100k ohm	3B
R126R	3069104970	100k ohm	3A
R127L	3069104970	100k ohm	3B
R127R	3069104970	100k ohm	3A
R128L	3069104970	100k ohm	3B
R128R	3069104970	100k ohm	3A
R129	3069472970	4.7k ohm	2B
R130~R135		Not used	
R136	3069103970	10k ohm	3B
R137,R138	3069103970	10k ohm	2B
R139	3069221970	220 ohm	2B
R140L	3069105970	1M ohm	2A
R140R	3069105970	1M ohm	3A
R141L	3069105970	1M ohm	2A
R141R	3069105970	1M ohm	2A
R142L	3069102970	1k ohm	1A
R142R	3069102970	1k ohm	4A
R143L	3069102970	1k ohm	2A
R143R	3069102970	1k ohm	4A
R144,R145	3069103970	10k ohm	2A
R146	3069103970	10k ohm	3B
R147		Not used	
R148~R151	3069103970	10k ohm	4C
R152~R156		Not used	
R157~R161	3069101970	100 ohm	1C
R162		Not used	
R163	3069271970	270 ohm	2C
R164,R165	3069154970	150k ohm	2C
R166	3069271970	270 ohm	2C
R167	3069102970	1k ohm	2C
R168	3069103970	10k ohm	2C
R169	3069183970	18k ohm	2C
R170	3069122970	1.2k ohm	2C
R171	3069103970	10k ohm	2C
R172,R173	3069472970	4.7k ohm	1C
R174	3069470970	47 ohm	3B
R175	3069103970	10k ohm	1C
R176	3069152970	1.5k ohm	1C
R177,R178	3069479970	4.7 ohm	1C
R179	3069103970	10k ohm	1C
R180	3069102970	1k ohm	1C

Ref. No	Part No.	Description	Position
R181	3069472970	4.7k ohm	1C
R182,R183	3069103970	10k ohm	4B
R184	3069102970	1k ohm	2C
R185	3069103970	10k ohm	1C
R186	3069102970	1k ohm	1B
R187	3069103970	10k ohm	1B
R188	3069103970	10k ohm	2B
R189	3069152970	1.5k ohm	1B
R190	306123970	12k ohm	1A
R191	3069122970	1.2k ohm	1A
R192	3069822970	8.2k ohm	1B
R193	3069102970	1k ohm	1B
R194,R195	3069103970	10k ohm	3B
R196	3069472970	4.7k ohm	1C
R197	3069103970	10k ohm	1C
R198L	3069103970	10k ohm	2A
R198R	3069103970	10k ohm	4A
R199L	3069102970	1k ohm	2A
R199R	3069102970	1k ohm	4A
R200		Not used	
R201~R233		See Ass'y PCB Tone	
R234~R300		Not used	
R301~R318		See Ass'y PCB Tape	
R319~R400		Not used	
R401~R410		See Ass'y PCB Power	
R411~R500		Not used	
R501~R506		See Ass'y PCB Front	
R507~R600		Not used	
R601~R608		See Ass'y PCB Release	
R609~R700		Not used	
R701,R702		See Ass'y PCB Switch	
R703~900		Not used	
R901L	3069103970	10k ohm	1A
R901R	3069103970	10k ohm	3A
R902L	3069102970	1k ohm	1A
R902R	3069102970	1k ohm	3A
R903	3069473970	47k ohm	2B
R904	3069103970	10k ohm	4C
R905	3069151970	150 ohm	4B
• Others			
CON103	4428527020	Connector Plug 7A, 5512-07A, P=2.0	2A
CON104	4428508510	Connector Plug 8A, 5512-08A, P=2.0	3A
CON105	4428526020	Connector Plug 6P, LOW 53178-0610, P=2.0	2A
CON106	4428525950	Connector Plug 5P, LOW 53178-0510, P=2.0	3A
CON107	4428526030	Connector Plug 7P, LOW 53178-0710, P=2.0	4C
CON108	4428506910	Connector Plug 5P, 5267-05A	1C
CON109	435206167292	CNT Ass'y 6P, GIL-T-0616, 160mm – Main PCB to Tone PCB (CON701) –	4B
TUNER	3928802000	FM/AM Tuner Module Pack, EST-2253	4B/C
ANT JACK	3918000320	Antenna Jack, YJ-9	4A
	4002619500	Main P.C. Board (OLD)	
	4002619501	Main P.C. Board (NEW)	

Ref. No	Part No.	Description	Position
Ass'y P.C.B Tone			
• Integrated Circuits			
IC201	2168217138	LC7537AN, Electronic Volume Control LSI	
IC202L/R	2168000114	MC4558C, Dual OP-Amplifier	
IC203L/R	2168000114	MC4558C, Dual OP-Amplifier	
IC204L/R	2168000114	MC4558C, Dual OP-Amplifier	
• Transistors			
Q201L/R	2208606115	NPN KTD 1303 KEC	
Q202L/R	2208606115	NPN KTD 1303 KEC	
• Diode			
D201	2058322101	Switching 1N4148(M) 60V/500mW Silicon	
• Capacitors			
C201L/R	3479110035	Electrolytic 10 μF 16V SE M	
C202L/R	3679182120	Mylar 0.0018 μF 100V J	
C203L/R	3679104297	Mylar 0.1 μF 63V MINI K	
C204L/R	3679104297	Mylar 0.1 μF 63V MINI K	
C205L/R	3679122120	Mylar 0.0012 μF 100V J	
C206L/R	3479110035	Electrolytic 10 μF 16V SE M	
C207L/R	3519101935	Ceramic 100 pF 50V AXIAL J	
C208L/R	3479110975	Electrolytic 1 μF 50V SE M	
C209L/R	3479110035	Electrolytic 10 μF 16V SE M	
C210L/R	3479147875	Electrolytic 0.47 μF 50V SE M	
C211L/R	3479110035	Electrolytic 10 μF 16V SE M	
C212L/R	3479110975	Electrolytic 1 μF 50V SE M	
C213	3519104935	Ceramic 0.1 μF 50V AXIAL Z	
C214L/R	3479333121	Electrolytic 330 μF 10V SG M	
C215L/R	3479110975	Electrolytic 1 μF 50V SE M	
C216L/R	3479110975	Electrolytic 1 μF 50V SE M	
C217L/R	3479110035	Electrolytic 10 μF 16V SE M	
C218L/R	3479110035	Electrolytic 10 μF 16V SE M	
C219L/R	3479110975	Electrolytic 1 μF 50V SE M	
C220L/R	3479110975	Electrolytic 1 μF 50V SE M	
C221	3519223520	Ceramic 0.022 μF 25V AXIAL Z	
• Resistors (All Resistors are Carbon Film 1/5W J Type unless otherwise noted.)			
R201L/R	3069105970	1M ohm	
R202L/R	3069332970	3.3k ohm	
R203L/R	3069153970	15k ohm	
R204L/R	3069103970	10k ohm	
R205L/R	3069105970	1M ohm	
R206L/R	3069105970	1M ohm	
R207L/R	3069105970	1M ohm	
R208	3069104970	100k ohm	
R209~R211	3069103970	10k ohm	
R212L/R	3069103970	10k ohm	
R213L/R	3069103970	10k ohm	
R214L/R	3069102970	1k ohm	
R215L/R	3069102970	1k ohm	
R216L/R	3069105970	1M ohm	
R217L/R	3069103970	10k ohm	
R218L/R	3069105970	1M ohm	
R219L/R	3069103970	10k ohm	
R220L/R	3069243970	24k ohm	
R221L/R	3069243970	24k ohm	
R222L/R	3069102970	1k ohm	
R223L/R	3069102970	1k ohm	
R224L/R	3069102970	1k ohm	
R225L/R	3069103970	10k ohm	
R226L/R	3069103970	10k ohm	
R227L/R	3069102970	1k ohm	
R228,R229		Not used	
R230L/R	3069103970	10k ohm	
R231L/R	3069393970	39k ohm	
R232L/R	3069102970	1k ohm	
R233L/R	3069102970	1k ohm	
• Others			
CNT201	4448400410	Connector Plug 8P, 5513-08APB, P=2.0	
CNT202	4428527010	Connector Plug 7P, 5513-07APB, P=2.0	
CNT203	4428505810	Connector Plug 6P, 5267-06A	
	4003615800	Tone P.C. Board	

Ref. No	Part No.	Description	Position
Ass'y P.C.B Tape			
• Integrated Circuits			
IC301	2168017105	LA3161, Tape EQ. Amplifier	
IC302		Not used	
• Transistors			
Q301L/R	2238402109	NPN KSR 1209 SAMSUNG	
Q302		Not used	
• Diodes			
D301~D303		Not used	
• Semi-Fixed Variable Resistors			
VR301L/R		Not used	
• Capacitors			
C301L/R	3679102120	Mylar 0.001 μF 100V J	
C302L/R	3479110975	Electrolytic 1 μF 50V SE M	
C303L/R	3519471935	Ceramic 470 pF 50V AXIAL J	
C304L/R	3439347041	Electrolytic 47 μF 25V SG M	
C305L/R	3679223120	Mylar 0.022 μF 100V J	
C306	3479322121	Electrolytic 220 μF 10V SG M	
C307L/R	3679183120	Mylar 0.018 μF 100V J	
C308	3479147935	Electrolytic 4.7 μF 16V SE M	
C309	3479310121	Electrolytic 100 μF 10V SG M	
C310~C317		Not used	
• Resistors (All Resistors are Carbon Film 1/5W J Type unless otherwise noted.)			
R301L/R	3069104970	100k ohm	
R302L/R	3069101970	100 ohm	
R303L/R	3069562970	5.6k ohm	
R304L/R	3069104970	100k ohm	
R305L/R	3069332970	3.3k ohm	
R306		Not used	
R307L/R		Not used	
R308L/R	3069392970	3.9k ohm	
R309L/R	3069104970	100k ohm	

Ref. No	Part No.	Description	Position
R310	3069104970	100k ohm	
R311	3069472970	4.7k ohm	
R312	3069101970	100 ohm	
R313~R318		Not used	
• Others			
CON301	4428505810	Connector Plug 6p, 5267-6A	
CON302	4428526160	Connector Plug 7P, LOW 52257-0710 P=2.0	
	4002619510	Tape P.C. Board	

Ass'y P.C.B Power

• Integrated Circuits			
IC401L/R	2168099140	TDA1516AQ, Power IC	
• Capacitors			
C401L/R	3479110975	Electrolytic 1 μF 50V SE M	
C402L/R	3479110975	Electrolytic 1 μF 50V SE M	
C403L/R	3519471935	Ceramic 470 pF 50V AXIAL J	
C404L/R	3519471935	Ceramic 470 pF 50V AXIAL J	
C405L/R	3479310121	Electrolytic 100 μF 10V SG M	
C406L/R	3519104935	Ceramic 0.1 pF 50V AXIAL Z	
C407L/R	3409210233	Electrolytic 1000 μF 16V CV M	
C408L/R	3409222239	Electrolytic 2200 μF 16V CV M	
• Resistors (All Resistors are Carbon Film 1/5W J Type unless otherwise noted.)			
R401L/R	3069102970	1k ohm	
R402L/R	3069102970	1k ohm	
• Others			
SW1	4618005810	Switch Slide, SSJ74K JSS4208A, 2CH/4CH	
CON401	4428526000	Connector Plug 6p, LOW 52257-0610, P=2.0	
CON402	4428526150	Connector Plug 5p, LOW 52257-0510, P=2.0	
	4358307430	CNT Ass'y Power 18P, to CON403,CON404,CON405	
CON6	435205067292	CNT Ass'y 5P, GTG-T,T DL 160mm, B'D to B'D	
	4003615500	Power P.C. Board	

Ass'y P.C.B Front

• Diodes			
LED1~LED3	2308220603	LED, SLB-232DC3, Orange	
LED4	2308000108	LED, EBR222S-B1, Red	
• Switchs			
SW1~SW8	4658003510	Tact Switch, SKHLAK018A	
• Resistors (All Resistors are Carbon Film 1/5W J Type unless otherwise noted.)			
R501~R503		Not used	
R504~R506	3069331970	330 ohm	
• Others			
LAMP1~ LAMP3		Not used	
LAMP4~ LAMP6	2528201111	Lamp, 14V/40mA, ø3, PCB Type	
LAMP7		Not used	
LCD	2338319903	LCD, HL-3813	
CON501	4428570130	AC Socket, CSS5015-0101	
	6505121410	Cover Safety	
	8535037610	Filter LCD	
	8535037620	Filter	
	8543344710	Guide Reflector	
	872800180	Lamp Color Cap, Amber	
	4005607700	PCB Flexible (OLD)	
	4005607900	PCB Flexible (NEW)	
	4002618000	Front P.C. Board (OLD)	
	4002620700	Front P.C. Board (NEW)	

Ass'y P.C.B Release

• Diodes			
LED1~ LED11	2309220601	LED Chip, SLM-1251DWT, Orange	
• Switchs			
SW9~SW18	4658020010	Tact Switch, SKQDPB002A	
• Resistors (All Resistors are Carbon Film 1/10W J Type unless otherwise noted.)			
R601~R603	3099221870	220 ohm CHIP	
R604	3099391870	390 ohm CHIP	
• Other			
	4003616000	Release P.C. Board	

Ass'y P.C.B Switch

• Resistors (All Resistors are Carbon Film 1/5W J Type unless otherwise noted.)			
R701,R702	3069103970	10k ohm	
• Others			
	4002619520	Switch P.C. Board	

Ass'y P.C.B CD Connector

• Others			
CON801	435109087291	CNT Ass'y 9P, 5395,5395-0908, 80mm – CD PCB to Main PCB (CON101,CON102) –	
CON802	4448003411	Socket 12P	
	4002619530	CD Connector P.C. Board	

Ass'y Deck Mechanism

Ref. No	Part No.	Description	Position
	5738000810	Deck Mecha, CDX-36MZ	
	6122023910	Bracket Deck	
	6505121610	Bracket Eject	
	8019126051	Screw, PM 2.6×5Y	
VR1	3228017110	Potentiometer, RK1243L00WA, Tone	
	8319126011	Spring Washer, ø2.6Y	
	435105220081	CNT Ass'y 5P, 5264-0522 SL, 220mm	
	435104085591	CNT Ass'y 4P, 5264-0408 SL, 80mm	

Ref. No	Part No.	Description	Position
Accessory Kits			
	4472000100	Accessory Power CNT Ass'y 18P	
	6512001860	Sleeve	
	6505089410	Key Sleeve	
	6505035010	Strap Back	
	8099150161	Screw, HEX MSP/W 5×16Y	
	8159150203	Screw, #1WPTC 5×20B	
	8209550011	Nut Flange Toothed M5	

NOTE: RESISTOR/CAPACITOR TOLERANCE:

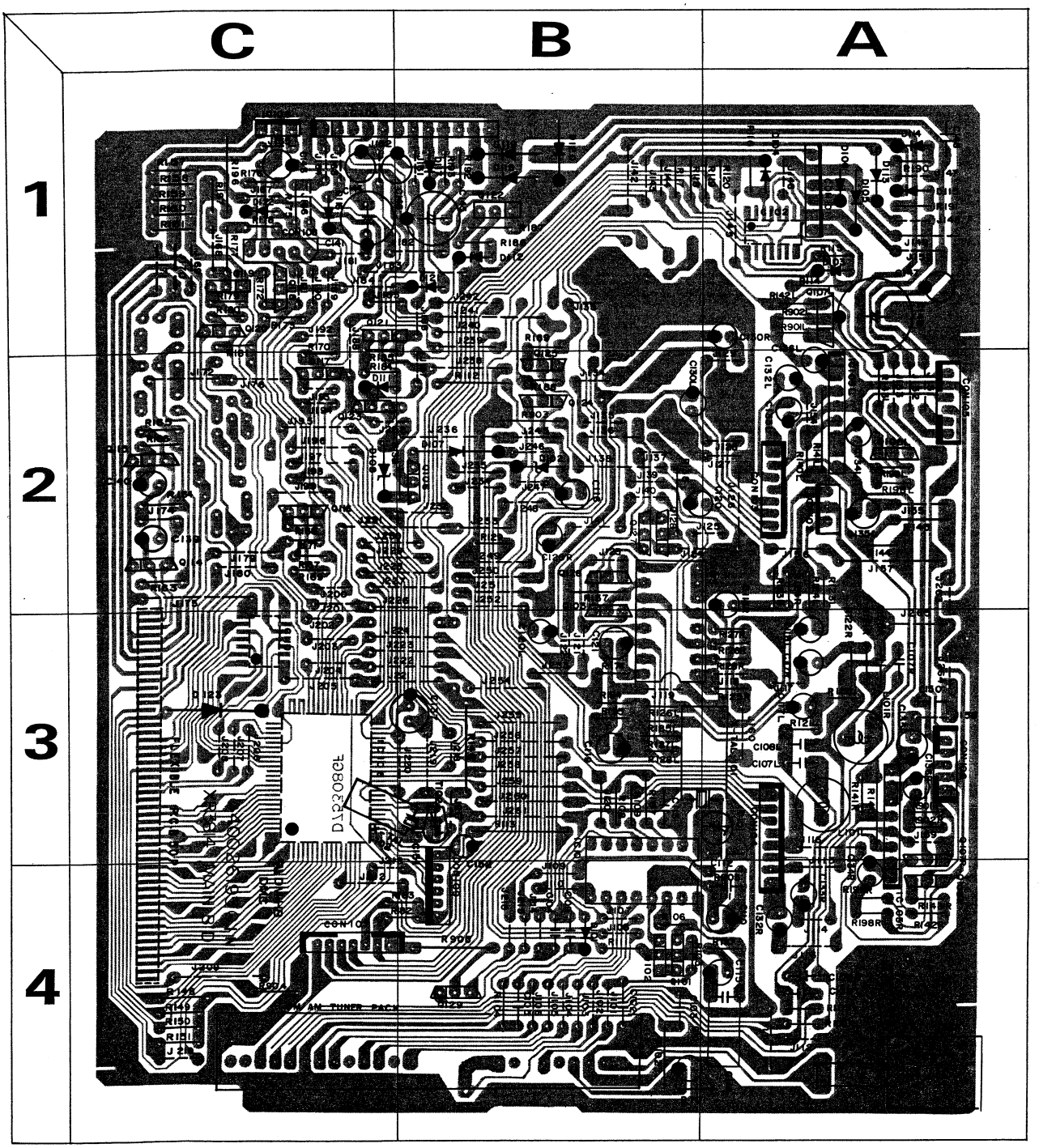
D: ±0.5%, J: ±5%, K: ±10%, M: ±20%, Z: +80% −20%

* MYLAR is a registered trade mark of E.I. Du pont de Nemours and Company.

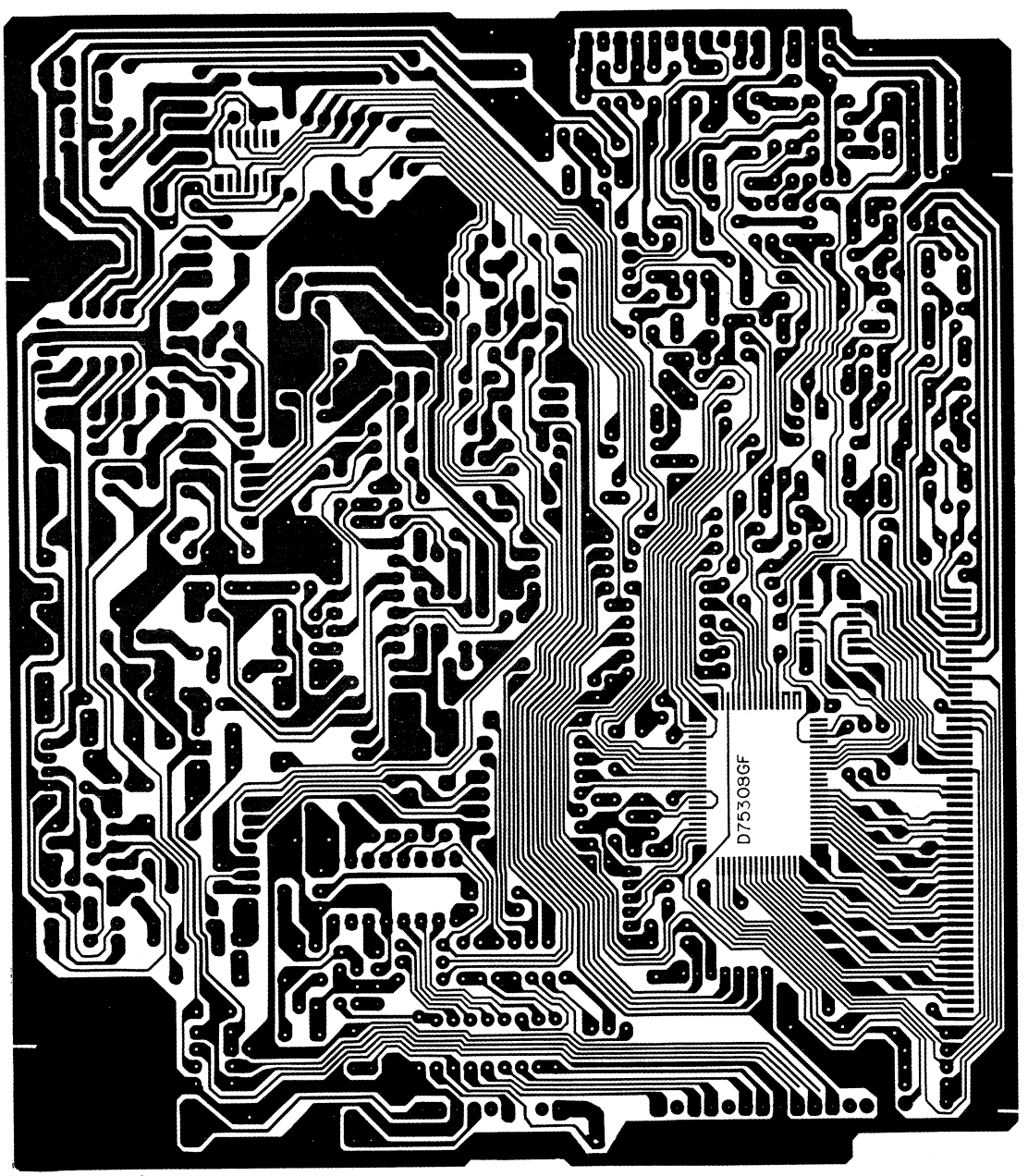
Top & Bottom View of P.C. Boards

MAIN P.C. BOARD 4002619500(4002619510)

— TOP VIEW —

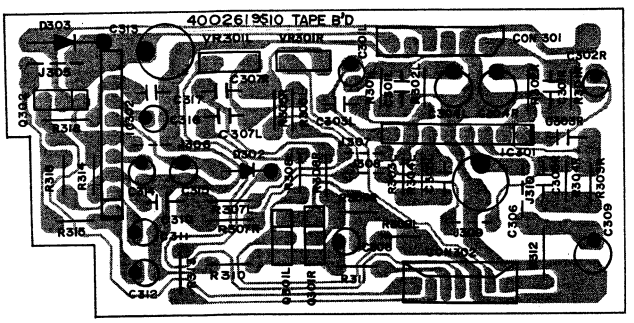


— BOTTOM VIEW —



TAPE P.C. BOARD 4002619510

— TOP VIEW —



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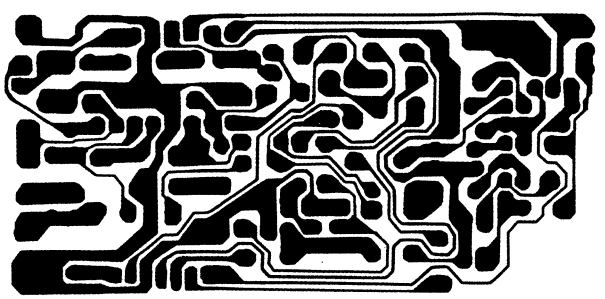
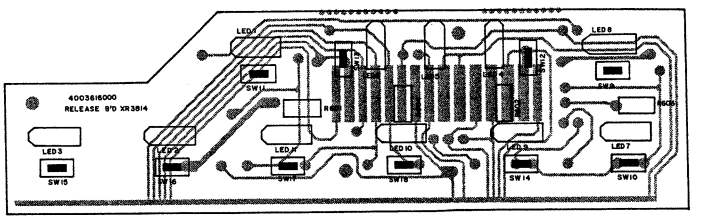


RELEASE P.C. BOARD 4003616000

— TOP VIEW —



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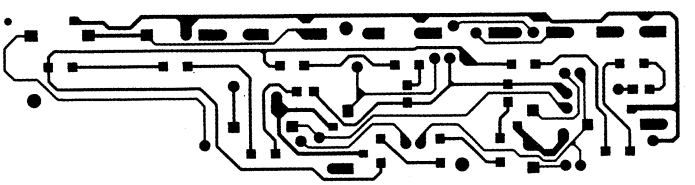
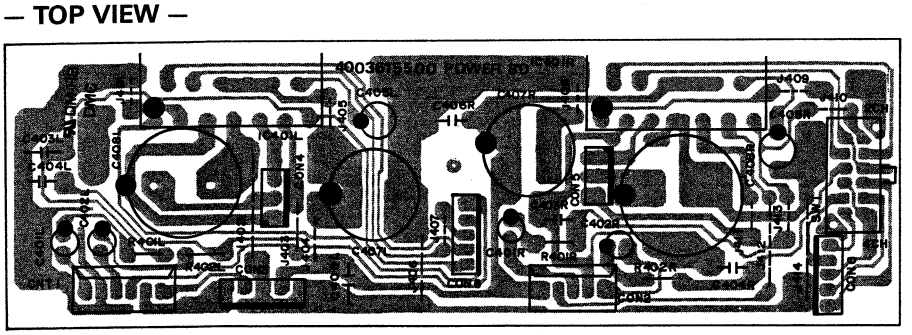


POWER P.C. BOARD 4003615500

— TOP VIEW —



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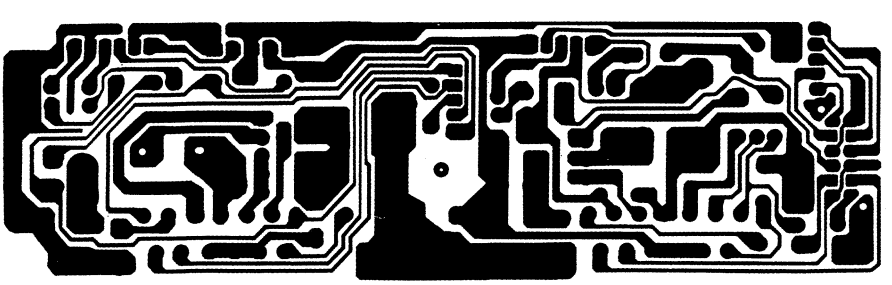
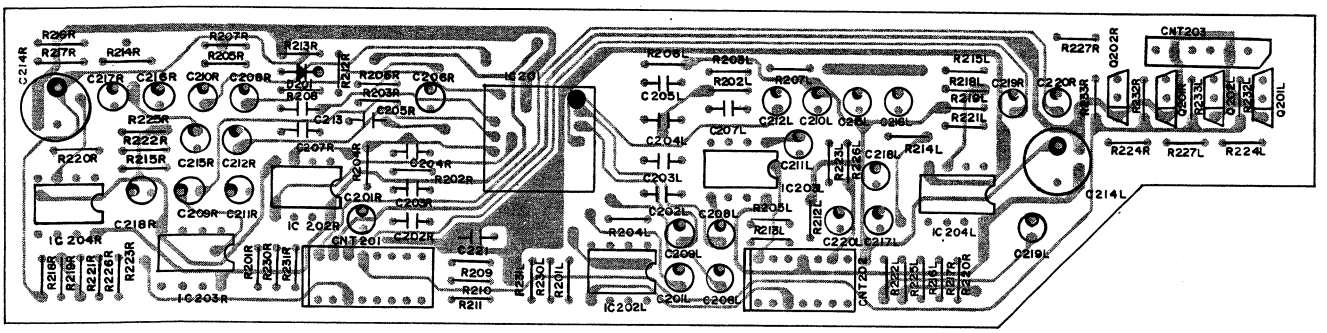


— TOP VIEW —



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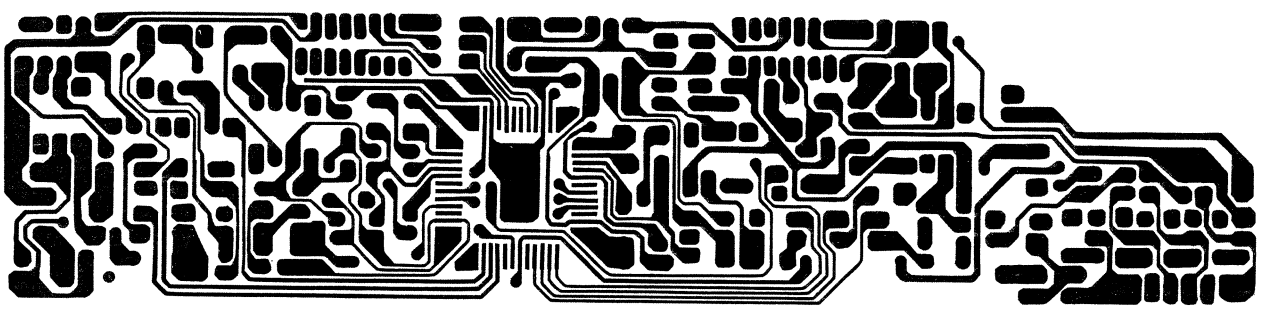
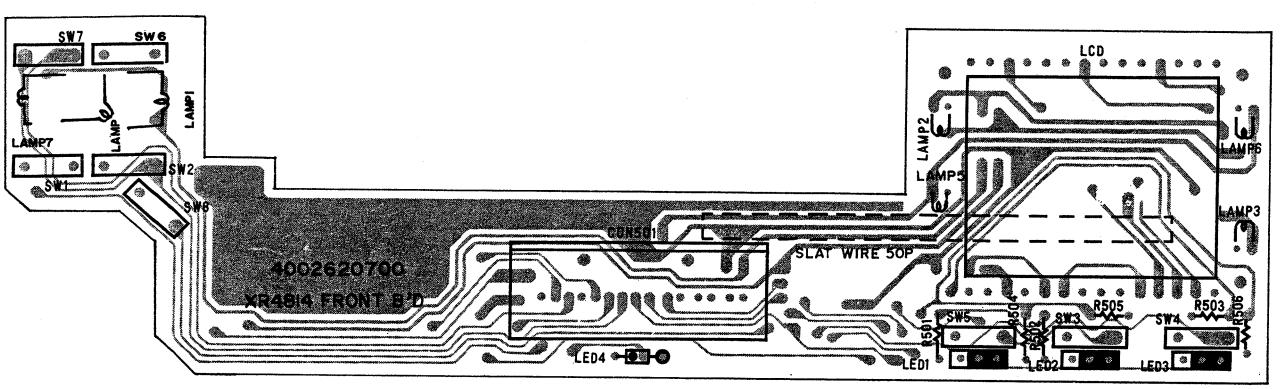


FRONT P.C. BOARD 4002618000 (4002620700)

— TOP VIEW —



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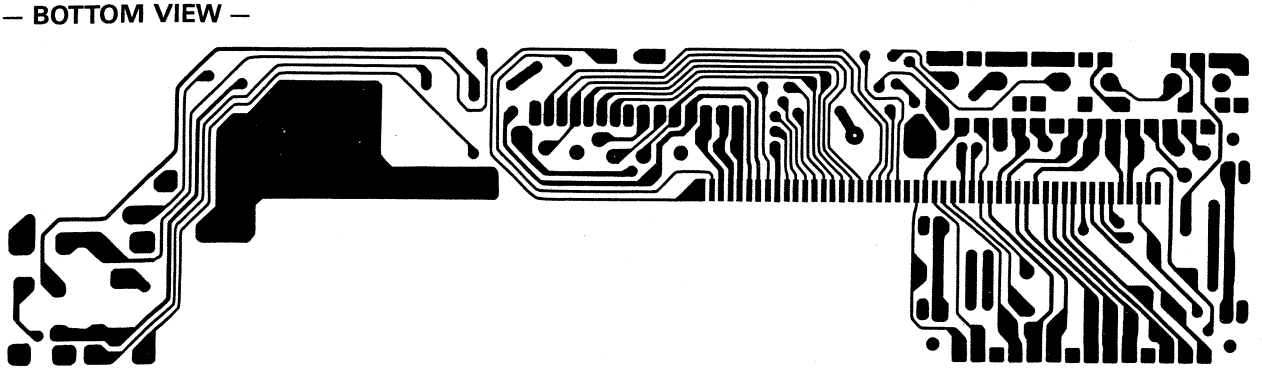
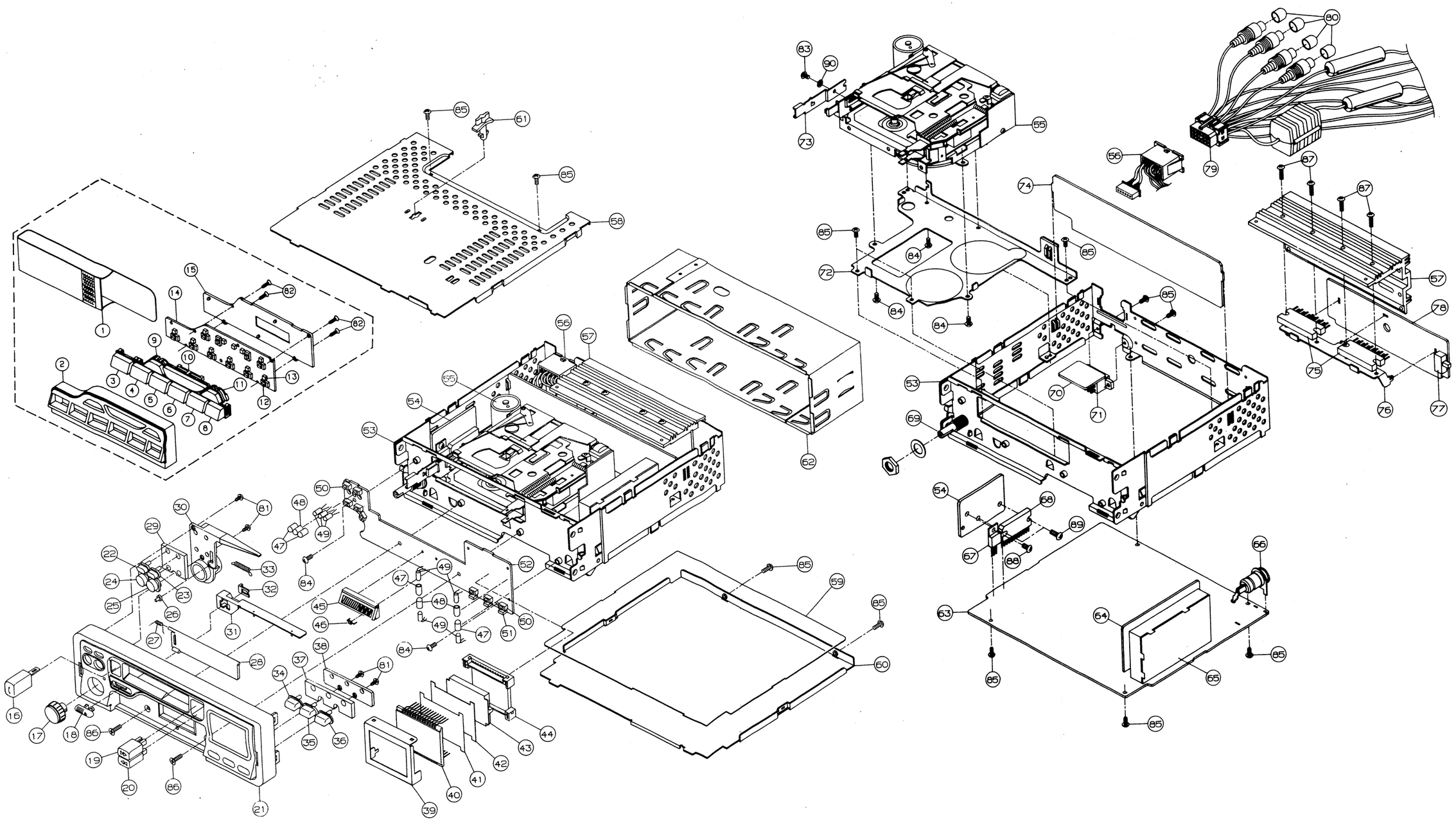


Exploded View Part List

Ref. No.	Part No.	Description	Q'TY
		Ass'y, Release Panel	
1	049715002011	Case Release Panel	1
2	048543044411	Release Panel	1
3	048545100811	Button Function – RPT/M1	1
4	048545100812	Button Function – SCN/M2	1
5	048545100813	Button Function – M3	1
6	048545100817	Button Function – M4	1
7	048545100815	Button Function – SHF/M5	1
8	048545100511	Button Function – PS/AS	1
9	048545100711	Button Function – T.Mode/Seek Manu	1
10	048545101511	Button Function – Tuning/Track	1
11	048545100712	Button Function – Band/Disk	1
12	4658020010	Switch Tact, SKQDPB002A	10
13	2308220601	LED, SLM-1251DWT87, Orange	11
14	4003616000	Release P.C. Board	1
15	048543044511	Cover Release Panel	1
82	8109720073	Screw, #2FT 2×7B	4
	058502007217	**Ass'y, Panel Front**	
18	048545101311	Knob – Release	1
21	048502007217	Panel Front	1
22	048545100911	Button Function – LOU	1
23	048545100912	Button Function – DSP	1
24	048545101111	Button Function – BAS/TRE	1
25	048545101112	Button Function – BAL/FAD	1
26	8545100610	Button Function – Reset	1
27	6555605910	Spring Door	1
28	048565002211	Door Cassette	1
29	6705018510	Sponge – A	1
30	8555039910	Reflector – A	1
31	6505121310	Bracket Release	1
32	8545101910	Locker Knob	1
33	6555306810	Spring Release	1
34	048545101011	Button Function – Tuner	1
35	048545101012	Button Function – CD	1
36	048545101013	Button Function – Tape	1
37	6705018610	Sponge – B	1
38	8555040010	Reflector – B	1
81	8119220051	Screw, #2PT 2×5Y	4
16	048545100211	Button Function – Eject	1
17	8545101210	Knob – VR	1
19	048545100311	Button Function – FF	1
20	048545100411	Button Function – REW	1
39	6505121410	Cover Safty	1
40	2338319903	LCD, HL-3813	1
41	8535037620	Filter	1
42	8535037610	Filter LCD	1
43	8555039720	Reflector LCD	1
44	8543044720	Guide Reflector	1
45	4428570130	AC Socket, CSS5015-0101	1
46	2308000108	LED, EBR2222S-B1, Red	1
47		Not used	
48	8728000180	Lamp Color Cap, Amber	3
49	2528201111	Lamp, 14V/40mA, ø3, PCB Type	3
50	4658003510	Switch Tact, SKHLAK018A	8

Ref. No.	Part No.	Description	Q'TY
51	2308220603	LED, SLB-232DC3, Orange	3
52	4002620700	Front P.C. Board	1
53	056122023620	Main Chassis	1
54	7505208610	Heat Sink IC	1
55	5738000810	Deck Mechanism, CDX-36MZ	1
56	4358307430	CNT Ass'y Power Connector 18P	1
57	7503013820	Heat Sink Main	1
58	6122023710	Cover Top	1
59	4835020210	Insulation Cover	1
60	6122023810	Cover Bottom	1
61	8545101810	Locker Pivot	1
62	6512001860	Sleeve	1
63	4002619501	Main P.C. Board	1
64	4002619510	Tape P.C. Board	1
65	3928802000	FM/AM Tuner Module Pack, EST-2253	1
66	3918000320	Antenna Jack, YJ-9	1
67	2168602103	IC, MC78M08C	1
68	2168627001	IC, BA3904	1
69	3228017110	Potentiometer, RK124113L00WA, Tone	1
70	4002619530	CD Connector P.C. Board	1
71	4448003411	Scoket 12P	1
72	6122023910	Bracket Deck	1
73	6505121610	Bracket Eject	1
74	4003615800	Tone P.C. Board	1
75	2168099140	Power IC, TDA1516AQ, BTL 25W	2
76	6505121540	Bracket IC	1
77	4618005810	Switch Slide, SSJ74K JSS4208A, 2CH/4CH	1
78	4003615500	Power P.C. Board	1
79	4472000100	Accessory Power Connector Ass'y 18P	1
80	6065101110	Cap Cord RCA	4
83	8019126043	Screw, PM 2.6×4B	1
84	8019126051	Screw, PM 2.6×5Y	6
85	8119926061	Screw, #2PS 2.6×6Y	18
86	8029126083	Screw, FM 2.6×8B	2
87	8019126121	Screw, PM 2.6×12Y	4
88	8119930061	Screw, #2PS 3×6Y	1
89	8119930081	Screw, #2PS 3×8Y	2
90	8319126011	Spring Washer, ø2.6Y	1

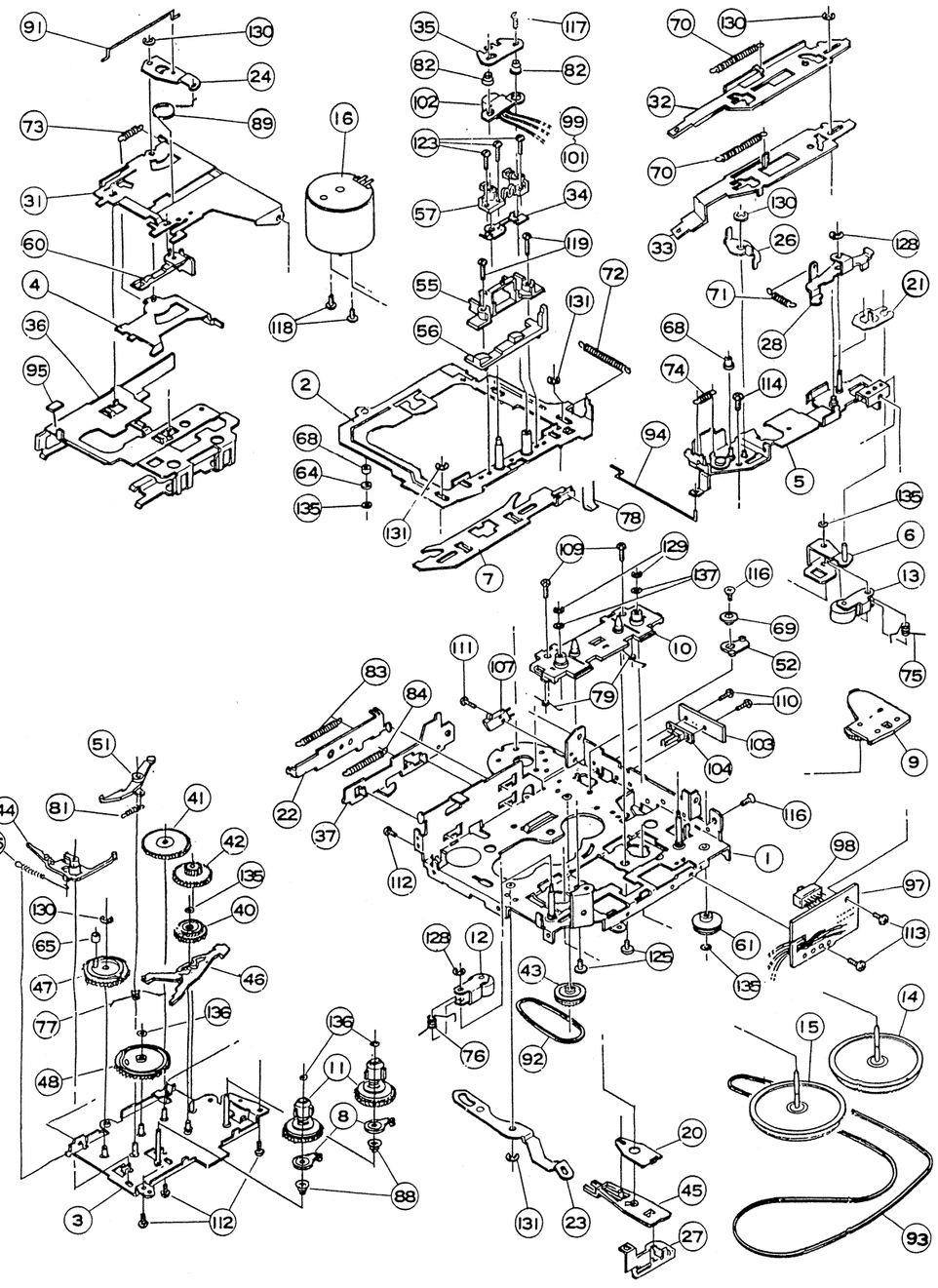
Exploded View of Cabinet & Chassis



Exploded View & Part List Deck Mechanism

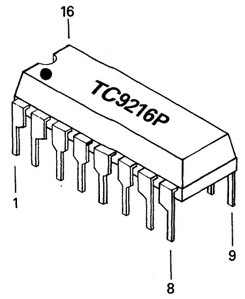
Ref. No.	Part No.	Description	Mfr.s Part No.	Q'ty
1	5799000661	Main Chassis Ass'y	3-0136-601	1
2	5799000662	Head Plate Ass'y	3-0138-121	1
3	5799000663	Reel Base Ass'y	3-0136-101	1
4	5799000664	Eject Cam Lock Ass'y	3-0036-119	1
5	5799000665	Lever Bracket Ass'y	3-0136-603	1
6	5799000666	F.F Arm Ass'y	3-0138-103	1
7	5799000667	F.R Changing Arm (A) Ass'y	3-0138-116	1
8	5799000668	Detector Cam Ass'y	3-0136-201	2
9	5799000669	T.U Arm Ass'y	3-0136-202	1
10	5799000670	CM Bracket Ass'y	3-0138-206	1
11	5799000671	Reel Spindle Ass'y	3-0136-604	2
12	5799000672	Pinch Arm (R) Ass'y	1-0138-602	1
13	5799000673	Pinch Arm (F) Ass'y	1-0138-603	1
14	5799000674	Flywheel Ass'y (F)	1-0036-601-6	1
15	5799000675	Flywheel Ass'y (R)	1-0036-601-8	1
16	5799000676	Motor Ass'y	3-0138-602	1
17~19		Not used		
20	5799000678	F.R Arm (A)	1-0136-102	1
21	5799000679	D.F Arm	1-0136-103	1
22	5799000680	Eject Lever	1-0036-107	1
23	5799000681	Reverse Lever	1-0036-116	1
24	5799000682	Center Plate	1-0036-118	1
25		Not used		
26	5799000683	Change Lever (B)	1-0036-123-5	1
27	5799000684	F.R Arm (B)	1-0036-126	1
28	5799000685	Lock Arm (A)	1-0036-129	1
29,30		Not used		
31	5799000687	Cassette Hunger	1-0138-102	1
32	5799000769	F.F Lever (Z)	1-0138-117	1
33	5799000770	REW Lever (Z)	1-0138-118	1
34	5799000690	Adjuster Shim	1-0138-106	1
35	5799000691	Hold Plate	1-0138-107	1
36	5799000692	Cassette Holder	1-0138-110	1
37	5799000693	Eject Cam	1-0138-113	1
38,39		Not used		
40	5799000694	Idel Gear	1-0036-201	1
41	5799000695	Reduction Gear (B)	1-0036-203	1
42	5799000696	Reduction Gear (A)	1-0036-204	1
43	5799000697	Pulley Gear	1-0036-205	1
44	5799000698	Rachet	1-0036-207	1
45	5799000699	F.F Arm (B)	1-0136-203	1
46	5799000700	Sensor Arm	1-0036-209	1
47	5799000701	Selector Gear	1-0036-210	1
48	5799000702	Detector Gear	1-0036-214	1
49,50		Not used		
51	5799000703	Gear Lock Arm	1-0038-214	1
52	5799000704	Mute Arm (N)	1-0038-234	1
53,54		Not used		
55	5799000705	Tape Guide	1-0138-203	1
56	5799000706	Adjuster Link	1-0138-204	1
57	5799000707	Adjuster Arm	1-0138-205	1
58,59		Not used		
60	5799000708	Tape Hooker	1-0058-204	1
61	5799000709	Idle Pulley (A)	1-0058-221-5	1
62,63		Not used		
64	5799000710	H.P Roller (A)	1-0036-302	1
65	5799000711	Collar (Selector Gear)	1-0036-318	1
66	5799000712	H.P Roller (B)	1-0036-324	1
67		Not used		
68	5799000713	Program Roller	1-0038-312	1
69	5799000714	Mute Arm Collar	1-0038-315	2
70	5799000715	F.F/REW Lever Spring	1-0036-401	1
71	5799000716	Lock Lever Spring	1-0036-402	1
72	5799000717	Head Plate Spring	1-0036-406	1

Ref. No.	Part No.	Description	Mfr.s Part No.	Q'ty
73	5799000718	Eject Cam Spring	1-0036-407	1
74	5799000719	Program Arm Spring	1-0036-408	1
75	5799000720	Pinch Arm Spring (FB)	1-0036-429	1
76	5799000721	Pinch Arm Spring (RB)	1-0036-430	1
77	5799000722	Dash Spring	1-0036-415	1
78	5799000723	Changing Arm Spring	1-0036-417	1
79	5799000724	Earth Spring (R)	1-0036-418	2
80		Not used		
81	5799000725	Gear Lock Arm Spring	1-0038-403	1
82	5799000726	Adjuster Arm Spring	1-0038-409	2
83	5799000727	Eject Lever Spring	1-0038-412	1
84	5799000728	Eject Cam Spring	1-0038-413	1
85	5799000729	Rachet Spring	1-0038-414	1
86,87		Not used		
88	5799000730	Back Tention Spring	1-0138-401	2
89	5799000731	Tanbbler Spring (B)	1-0058-436	1
90		Not used		
91	5799000732	Return Link	1-0036-506	1
92	5799000733	Sub Belt (B)	1-0036-508	1
93	5799000734	Main Belt	1-0038-510	1
94	5799000735	Selector Link	1-0038-501	1
95	5799000736	Holder Cushion	1-0030-597	1
96		Not used		
97	5799000737	Switch PWB	1-0136-701	1
98	5799000738	Head Select Switch	1-0036-707	1
99	5799000739	Wire (A), Orange	1-0038-710	1
100	5799000740	Wire (A), Brack	1-0036-702	1
101	5799000741	Wire (C), Yellow	1-0036-704	1
102	5799000742	One Way Play Head	1-0036-735	1
103	5799000743	Mute PWB	1-0138-702	1
104	5799000744	Mute Switch	1-0038-787	1
105,106		Not used		
107	5799000746	Power Switch	1-0058-711	1
108		Not used		
109	5799000747	Machine Screw Plain, #3 S-Tite M1.7×3	2-133F-030-H2	2
110	5799000748	Machine Screw Plain, #3 S-Tite M1.7×4	2-133F-040-H2	2
111	5799000749	Machine Screw Plain, #3 S-Tite M1.7×6	2-133F-060-H2	1
112	5799000750	Machine Screw Plain, #3 S-Tite M2×3	2-1332-030-H2	4
113	5799000751	Machine Screw Plain, #3 S-Tite M2×4	2-1332-040-H2	1
114	5799000752	Machine Screw Plain, #3 S-Tite M2×4	2-1332-030-H1	1
115		Not used		
116	5799000754	Machine Screw Flat, #1 S-Tite M2×4	2-1332-040-S2	2
117	5799000755	Machine Screw Plain, #1 M2×4	2-1012-040-H2	1
118	5799000756	Machine Screw Flat, #3 M2×2.5	2-1032-025-H2	2
119	5799000757	Machine Screw Flat, #3 M2×7	2-1032-070-H2	2
120~122		Not used		
123	5799000758	Azimuth Screw, P=0.25, M2×5	1-0138-502	3
124		Not used		
125	5799000759	Eject Hook Screw, M2×5	1-0038-505	2
126,127		Not used		
128	5799000760	E-Ring, ø1.5	2-171D-040-06	2
129	5799000761	E-Ring, ø1.6× ø3.2	2-171E-032-96	2
130	5799000762	E-Ring, ø2	2-1712-050-06	4
131	5799000763	E-Ring, ø2.5	2-171K-060-06	3
132~134		Not used		
135	5799000764	Poly Washer W/Notch, ø1.2× ø3×t0.25	2-1812-030-D2	4
136	5799000765	Poly Washer W/Notch, ø1.6× ø3.2×t0.25	2-1816-032-D2	3
137	5799000766	Poly Washer, ø2.1× ø3.2×t0.25	2-1821-032-D1	2
138	5799000767	Poly Washer, ø1.6× ø3.2×t0.25	2-1816-032-D1	1
139	5799000768	Poly Washer, ø2.1× ø3.5×t0.05	1-0136-501	2

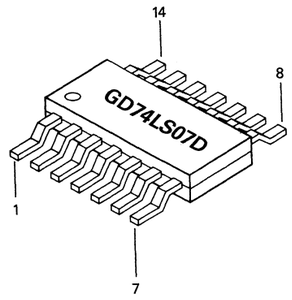


Semiconductor Lead Identification

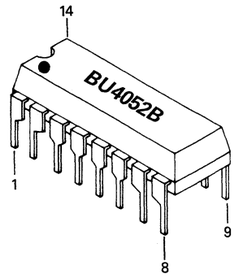
TC9216P/IC101



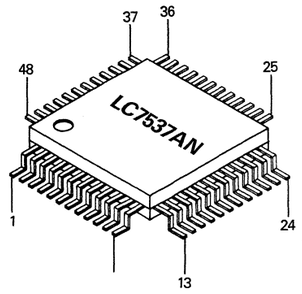
GD74LS07D/IC102



BU4052B/IC103



LC7537AN/IC201



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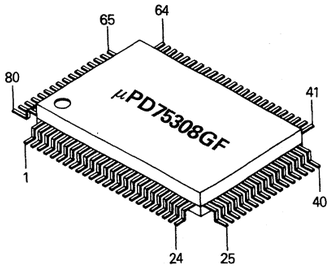
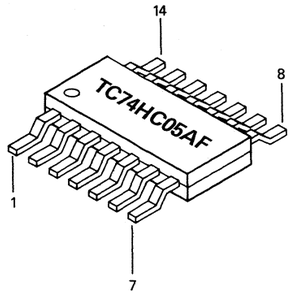
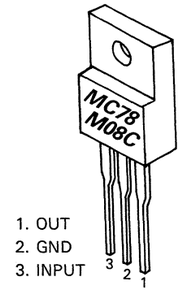


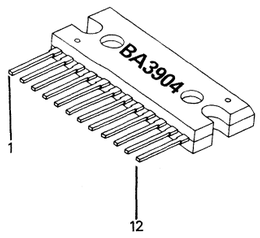
TC74HC05AF/IC110



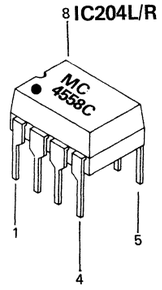
MC78M08C/IC108



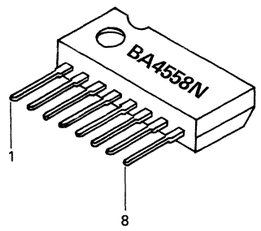
BA3904A/IC109



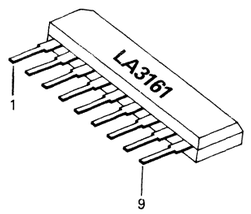
MC4558C/ IC202L/R, IC203L/R, IC204L/R



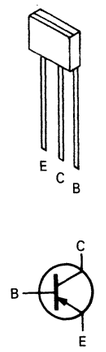
BA4558N/IC1052/R



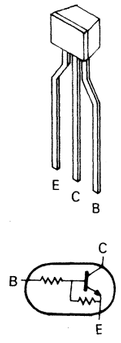
LA3161/IC301



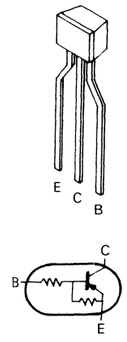
2SD1858/ Q110, Q113



DTC114Y(S)/Q120, Q123

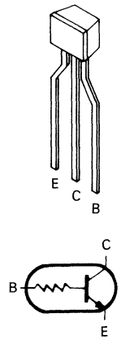


KSR2206/Q129

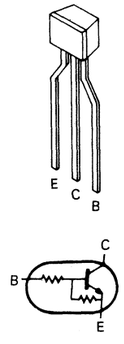


2SD636R/ Q101, Q102

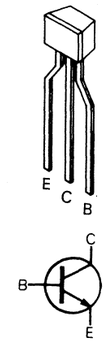
KSR1209/Q103, Q104, Q126, Q301L/R Q301L/R



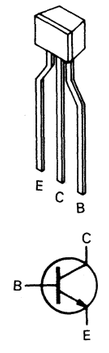
KSR1202/Q105, Q109, Q117, Q124



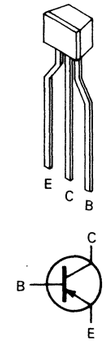
2SC1740(S)/Q106, Q114, Q115



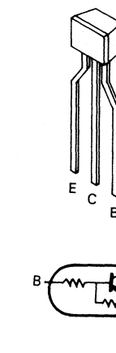
KTD1303/Q107L/R, Q108L/R, Q201L/R, Q202L/R, Q302



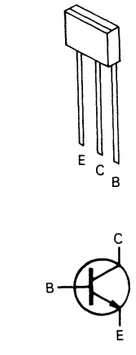
2SA933(S)/Q111, Q112, Q116, Q125



KSR2205/Q118

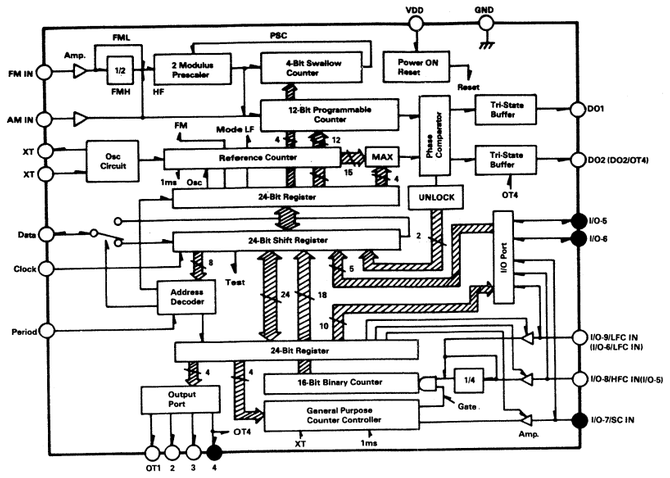


2SB1237TV/Q119, Q121, Q122

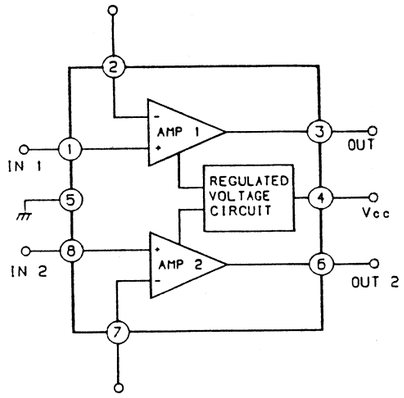


IC Internal Block Diagram

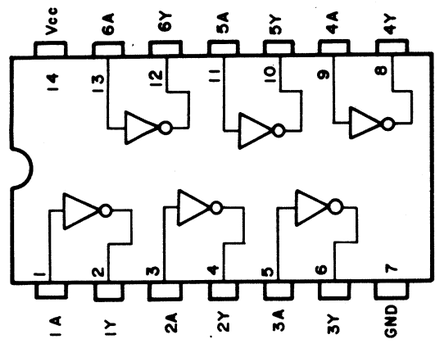
TC9216P(Prescaler/IC101)



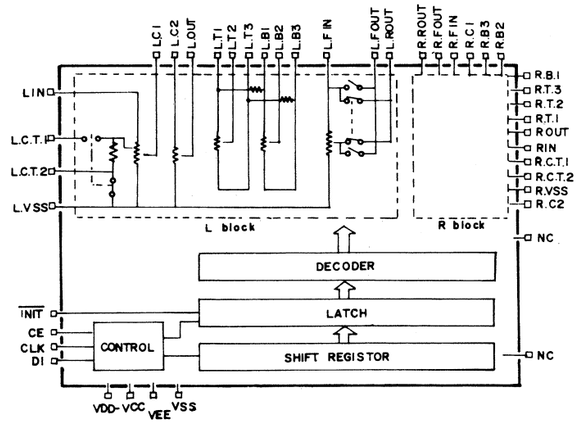
LA3161(Tape EQ. Pre-Amplifier/IC301)



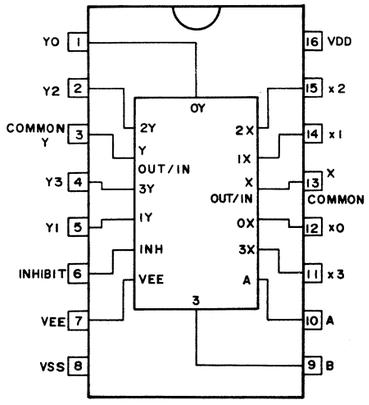
GD74LS07D(Hex Non-Inverted Buffer/IC102)



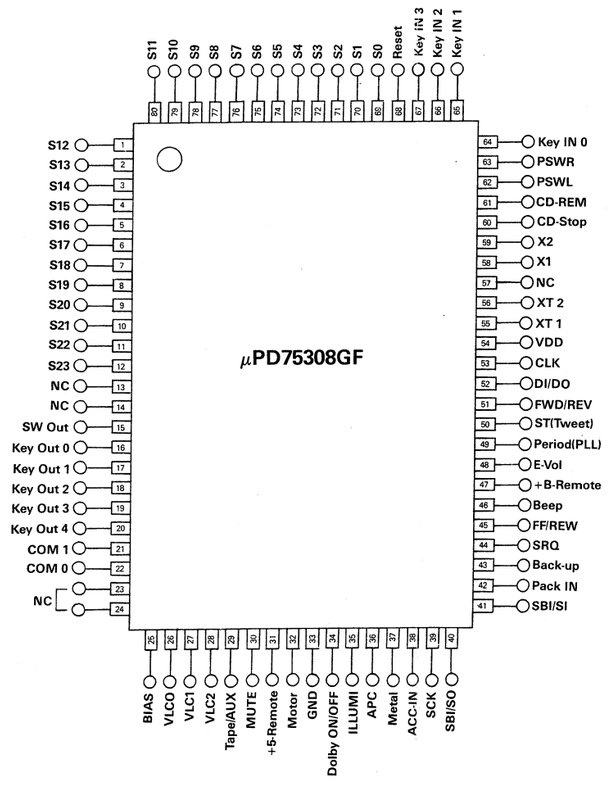
LC7537AN(Electric Volume Control/IC201)



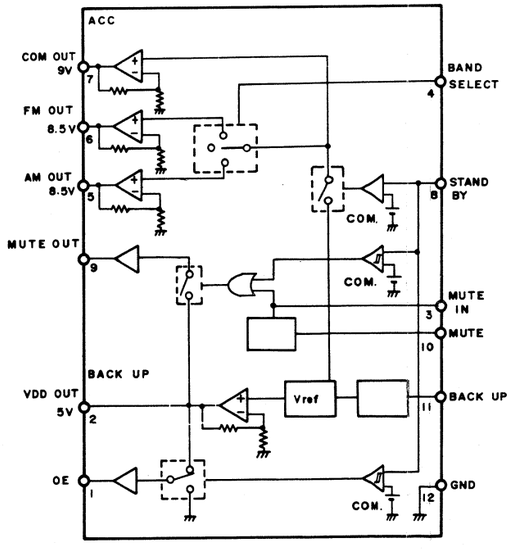
BU4052B(4-CH Analog Multiplexer/IC103)



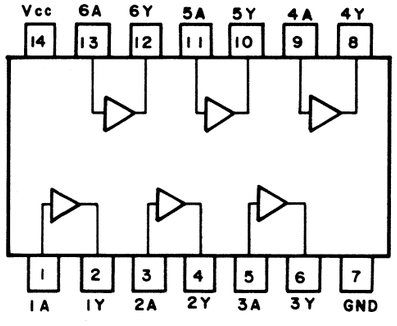
μPD75308GF(LCD Control LSI/IC106)



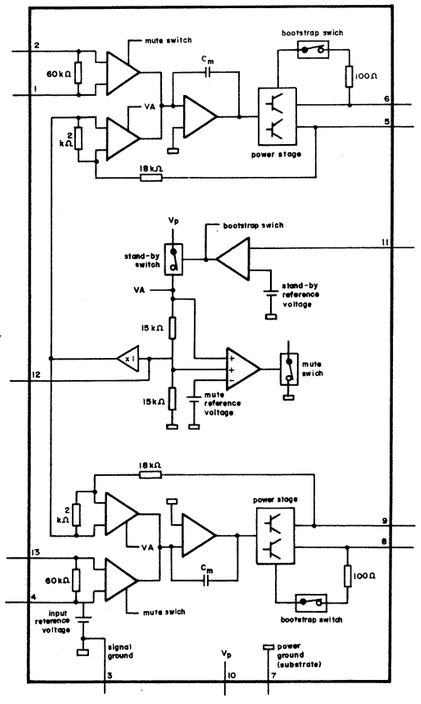
BA3904A(Voltage Generator/IC109)



TC74HC05AP(CMOS-Inverter/IC110)



TDA1516AQ(Power Amplifier/IC401L/R)

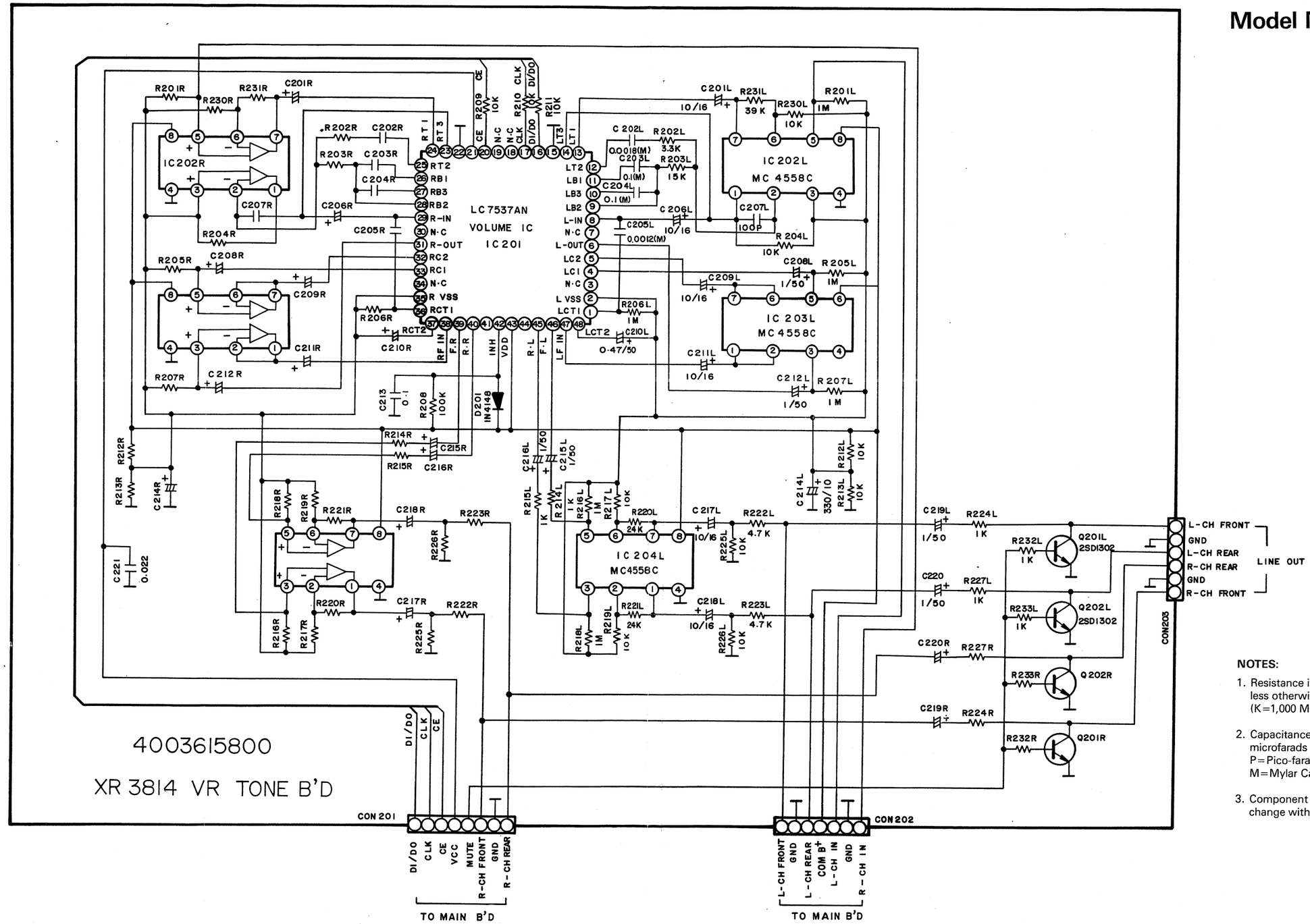


IC Voltage Charts

Pin No.	IC101 TC9216P No Signal	IC102(GD74LS07D) 98.1 MHz 1 mV Input	IC102(GD74LS07D) CD MODE	IC103(BU4052B) No Signal	IC103(BU4052B) 98.1 MHz 1 mV Input	IC105L/R BA4558N No Signal	IC106(uPD75308GF) Pin No.	IC106(uPD75308GF) No Signal FM MODE	IC106(uPD75308GF) Pin No.	IC106(uPD75308GF) No Signal FM MODE	Pin No.	IC108 MC78M08C FM MODE	IC109(BA3904A) FM MODE	IC109(BA3904A) AM MODE	IC110 TC74HC05AF FM MODE No Signal	IC201(LC7537AN) Pin No.	IC201(LC7537AN) FM MODE No Signal	IC201(LC7537AN) Pin No.	IC201(LC7537AN) FM MODE No Signal	Pin No.	IC202L/R MC4558C FM MODE No Signal	IC301 LA3161 TAPE ON
1	2.2V	1.6V	1.6V	4.4V	4.3V	4.5V	1	2.4V	41	4.6V	1	11.9V	4.8V	4.8V	0V	1	4.1V	41	N.C	1	4.4V	1.8V
2	2.2V	0V	0.1V	4.4V	4.3V	4.5V	2	2.3V	42	0.5V	2	GND	5.5V	5.5V	0.7V	2	4.5V	42	8.8V	2	4.5V	1.3V
3	0V	4.6V	4.7V	4.4V	4.3V	4.1V	3	2.3V	43	4.7V	3	8.0V	0.5V	0.5V	0V	3	N.C	43	8.8V	3	4.4V	3.7V
4	4.7V	4.6V	4.7V	4.4V	4.3V	GND	4	2.5V	44	4.6V	4		4.3V	0V	0.8V	4	4.5V	44	N.C	4	GND	8.3V
5	4.7V	4.6V	4.7V	4.4V	4.3V	4.1V	5	2.3V	45	3.6V	5		8.5V	0V	0V	5	4.2V	45	4.4V	5	4.1V	GND
6	N.C	4.6V	4.7V	GND	GND	4.5V	6	2.4V	46	0V	6		0V	8.7V	0.8V	6	4.1V	46	4.2V	6	4.5V	2.8V
7	0V	GND	GND	GND	GND	4.5V	7	2.4V	47	4.6V	7		8.9V	8.9V	GND	7	N.C	47	4.4V	7	4.5V	0.7V
8	4.3V	0.1V	0.1V	GND	GND	8.8V	8	2.3V	48	0V	8		12.6V	12.6V	0.2V	8	4.5V	48	4.5V	8	8.8V	1.2V
9	4.1V	1.6V	1.6V	0V	0V		9	2.4V	49	4.6V	9		0.8V	0V	0V	9	4.5V	49		9		14.0V
10	2.1V	4.6V	4.7V	0V	0V		10	2.4V	50	4.6V	10		0.58V	0.5V	0.1V	10	4.5V	50		10		
11	0V	4.6V	4.7V	4.4V	4.3V		11	2.4V	51	0V	11		13.5V	13.5V	0V	11	4.5V	51		11		
12	2.1V	4.6V	4.7V	4.4V	4.3V		12	2.3V	52	0V	12		GND	GND	0.2V	12	4.5V	52		12		
13	GND	4.6V	4.7V	4.4V	4.3V		13	0V	53	4.7V	13				0V	13	4.4V	53		13		
14	1.1V	4.6V	4.7V	4.4V	4.3V		14	0V	54	4.7V	14				4.8V	14	4.5V	54		14		
15	0V			4.4V	4.3V		15	0V	55	GND	15					15	GND	55		15		
16	4.3V			8.8V	8.8V		16	0V	56	4.6V	16					16	0V	56		16		
17							17	0V	57	4.7V	17					17	4.8V	57		17		
18							18	0V	58	2.2V	18					18	N.C	58		18		
19							19	0V	59	3.3V	19					19	8.9V	59		19		
20							20	0V	60	4.7V	20					20	0V	60		20		
21							21	2.3V	61	4.8V	21					21	5.0V	61		21		
22							22	2.3V	62	0V	22					22	GND	62		22		
23							23	2.3V	63	0V	23					23	4.5V	63		23		
24							24	2.3V	64	4.8V	24					24	4.5V	64		24		
25							25	4.7V	65	4.8V	25					25	4.5V	65		25		
26							26	4.7V	66	4.8V	26					26	4.5V	66		26		
27							27	2.3V	67	4.8V	27					27	0V	67		27		
28							28	2.3V	68	4.7V	28					28	4.5V	68		28		
29							29	0.1V	69	2.3V	29					29	4.5V	69		29		
30							30	2.0V	70	2.4V	30					30	N.C	70		30		
31							31	0.1V	71	2.4V	31					31	4.4V	71		31		
32							32	0V	72	2.3V	32					32	4.4V	72		32		
33							33	GND	73	2.3V	33					33	4.5V	73		33		
34							34	2.7V	74	2.3V	34					34	N.C	74		34		
35							35	0V	75	2.3V	35					35	4.5V	75		35		
36							36	0V	76	2.4V	36					36	4.0V	76		36		
37							37	0V	77	2.4V	37					37	4.5V	77		37		
38							38	4.8V	78	2.4V	38					38	4.4V	78		38		
39							39	4.6V	79	2.3V	39					39	4.4V	79		39		
40							40	4.6V	80	2.2V	40					40	4.4V	80		40		

Schematic Diagram (I)

Model No.:XR-3813

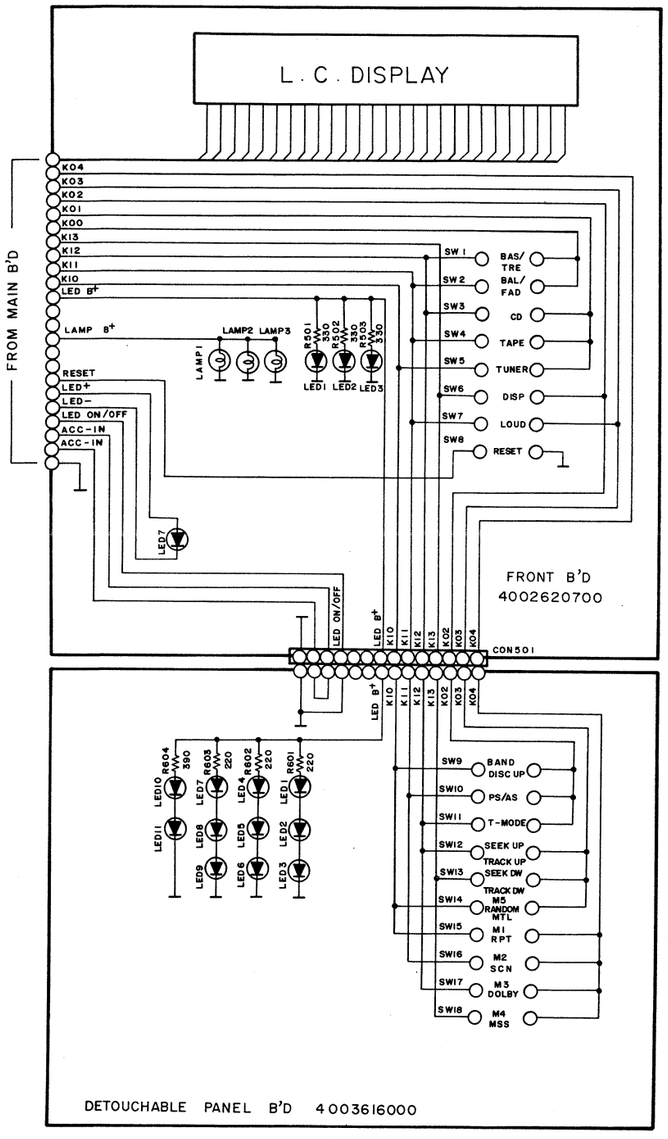


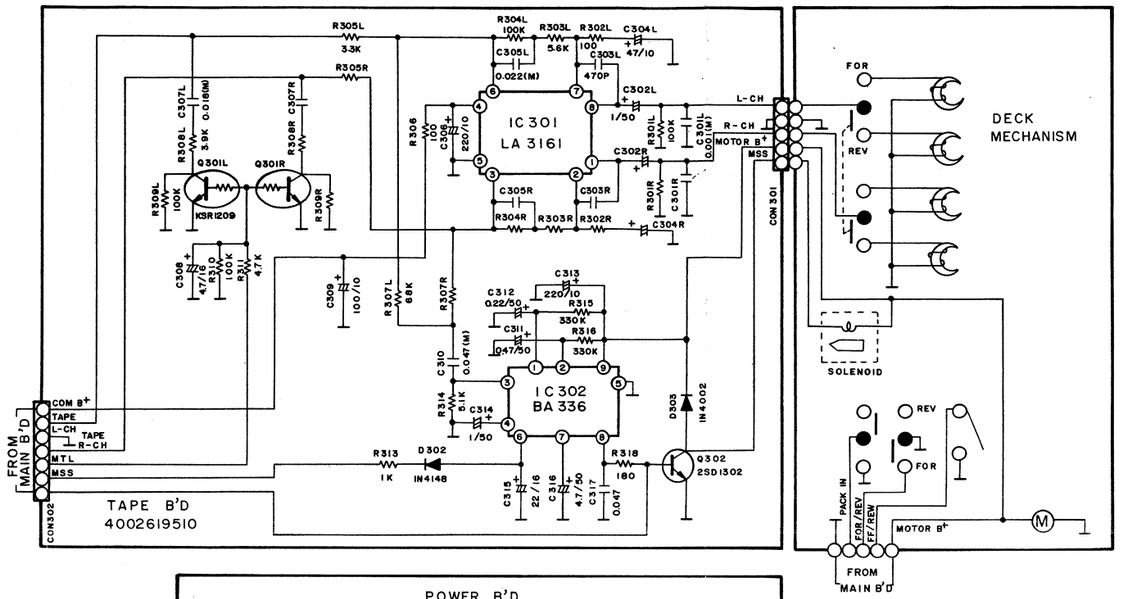
NOTES:

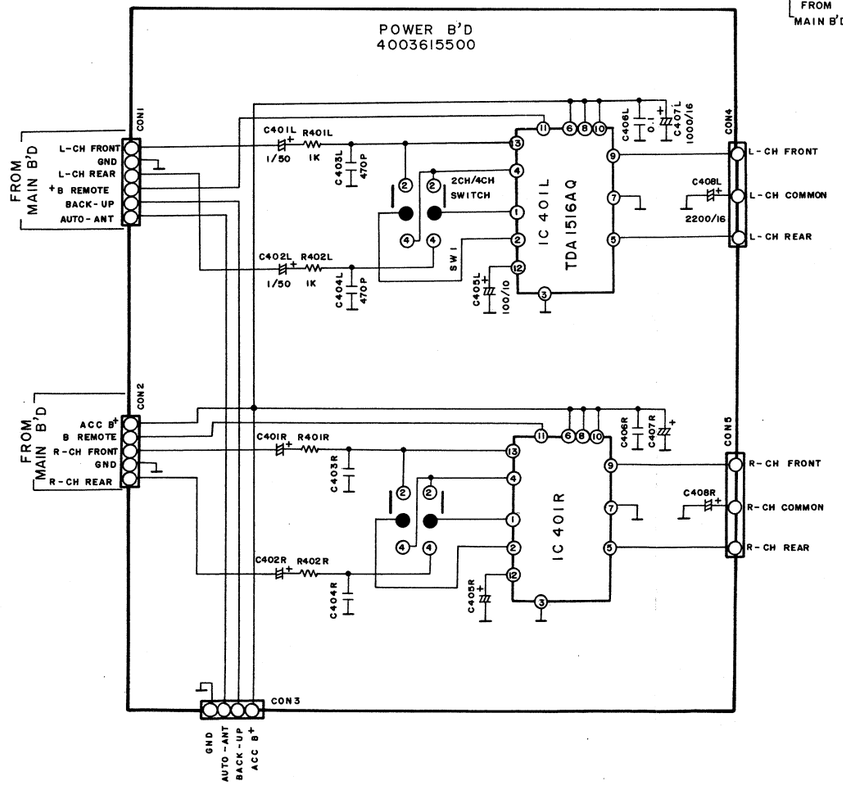
1. Resistance is indicated in ohms unless otherwise specified. (K=1,000 M=1,000,000)
2. Capacitance values are shown in microfarads unless otherwise noted. P=Pico-farad=Micro-Microfarad, M=Mylar Capacitor
3. Component values are subject to change without notice.

Schematic Diagram (II)

Model No.: XR-3813





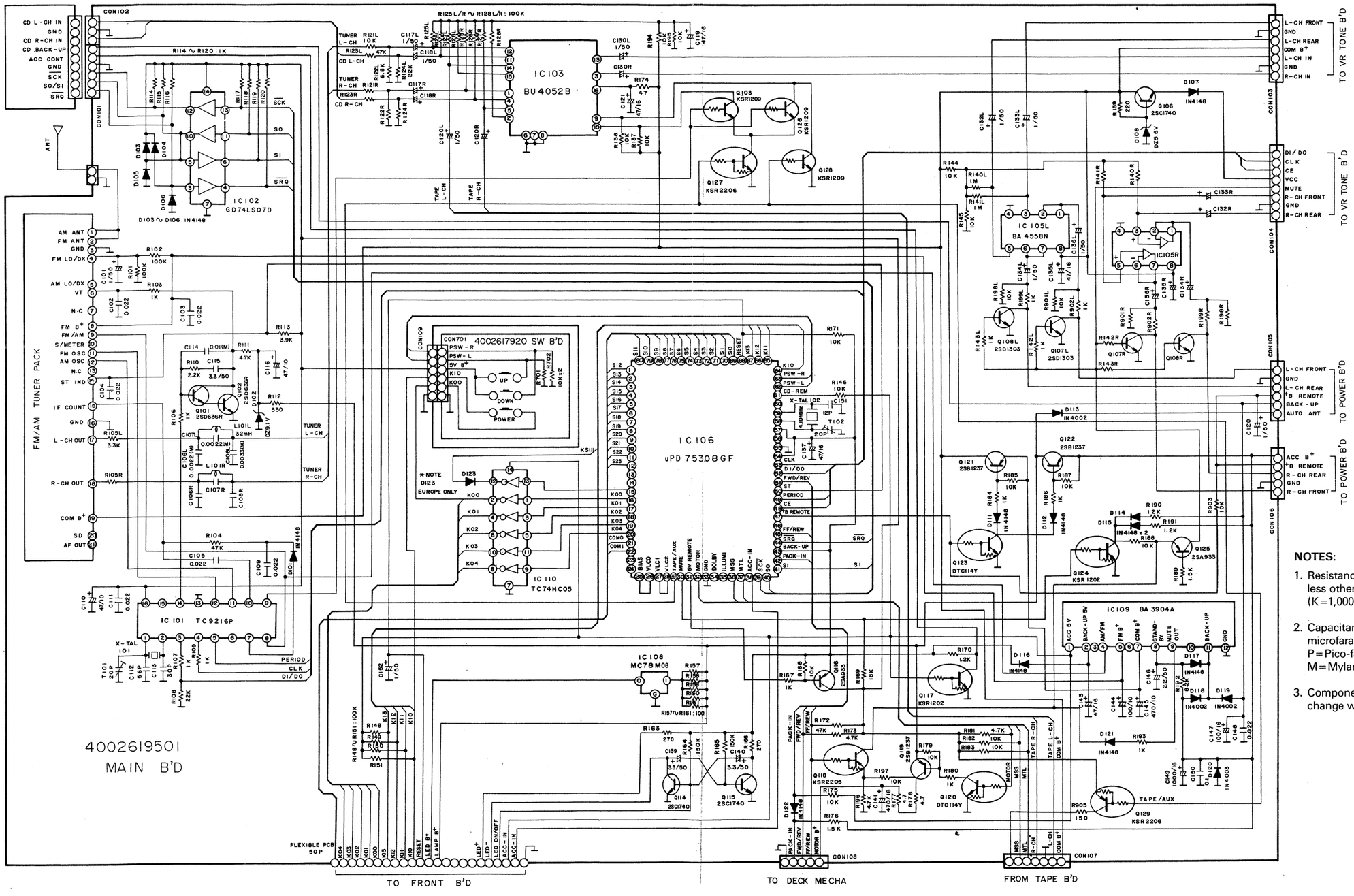


NOTES:

1. Resistance is indicated in ohms unless otherwise specified. (K=1,000 M=1,000,000)
2. Capacitance values are shown in microfarads unless otherwise noted. P=Pico-farad=Micro-Microfarad, M=Mylar Capacitor
3. Component values are subject to change without notice.

Schematic Diagram (III)

Model No.: XR-3813

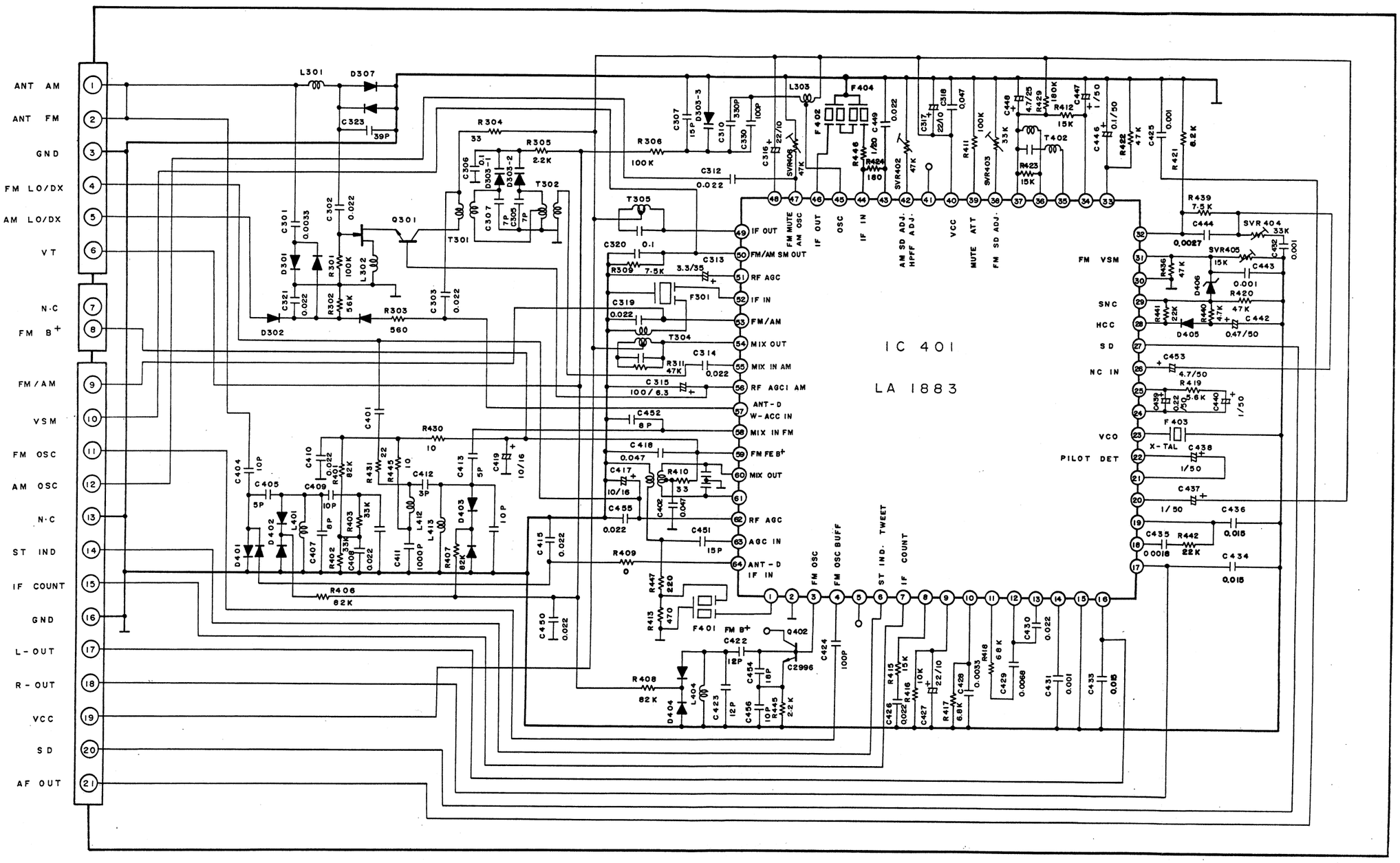


NOTES:

1. Resistance is indicated in ohms unless otherwise specified. (K=1,000 M=1,000,000)
2. Capacitance values are shown in microfarads unless otherwise noted. P=Pico-farad=Micro-Microfarad, M=Mylar Capacitor
3. Component values are subject to change without notice.

Schematic Diagram (IV)

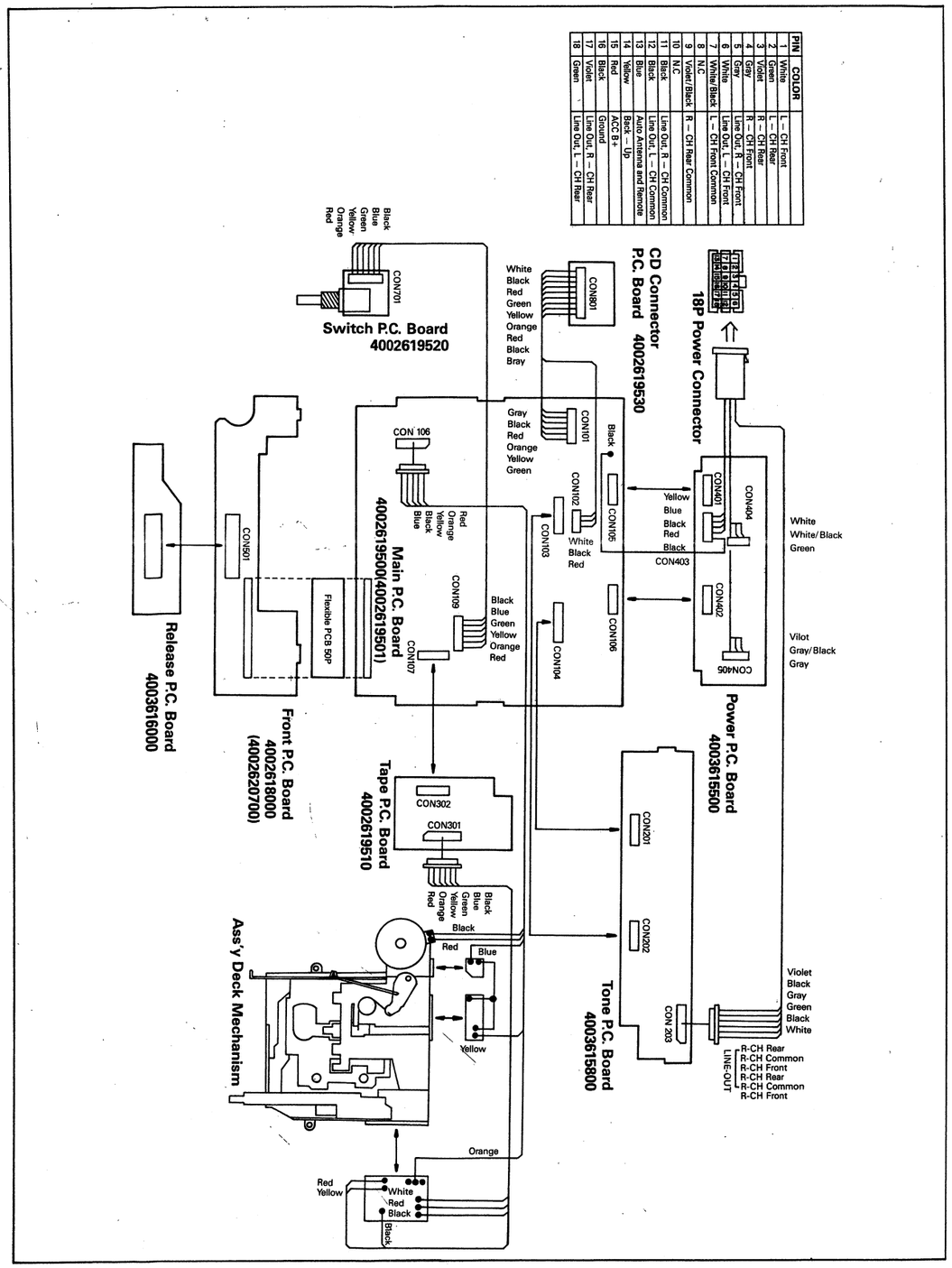
Model No.: XR-3813



NOTES:

1. Resistance is indicated in ohms unless otherwise specified. (K=1,000 M=1,000,000)
2. Capacitance values are shown in microfarads unless otherwise noted. P=Pico-farad=Micro-Microfarad, M=Mylar Capacitor
3. Component values are subject to change without notice.

Point to Point Wiring Diagram



A B C D

1 2 3 4 5

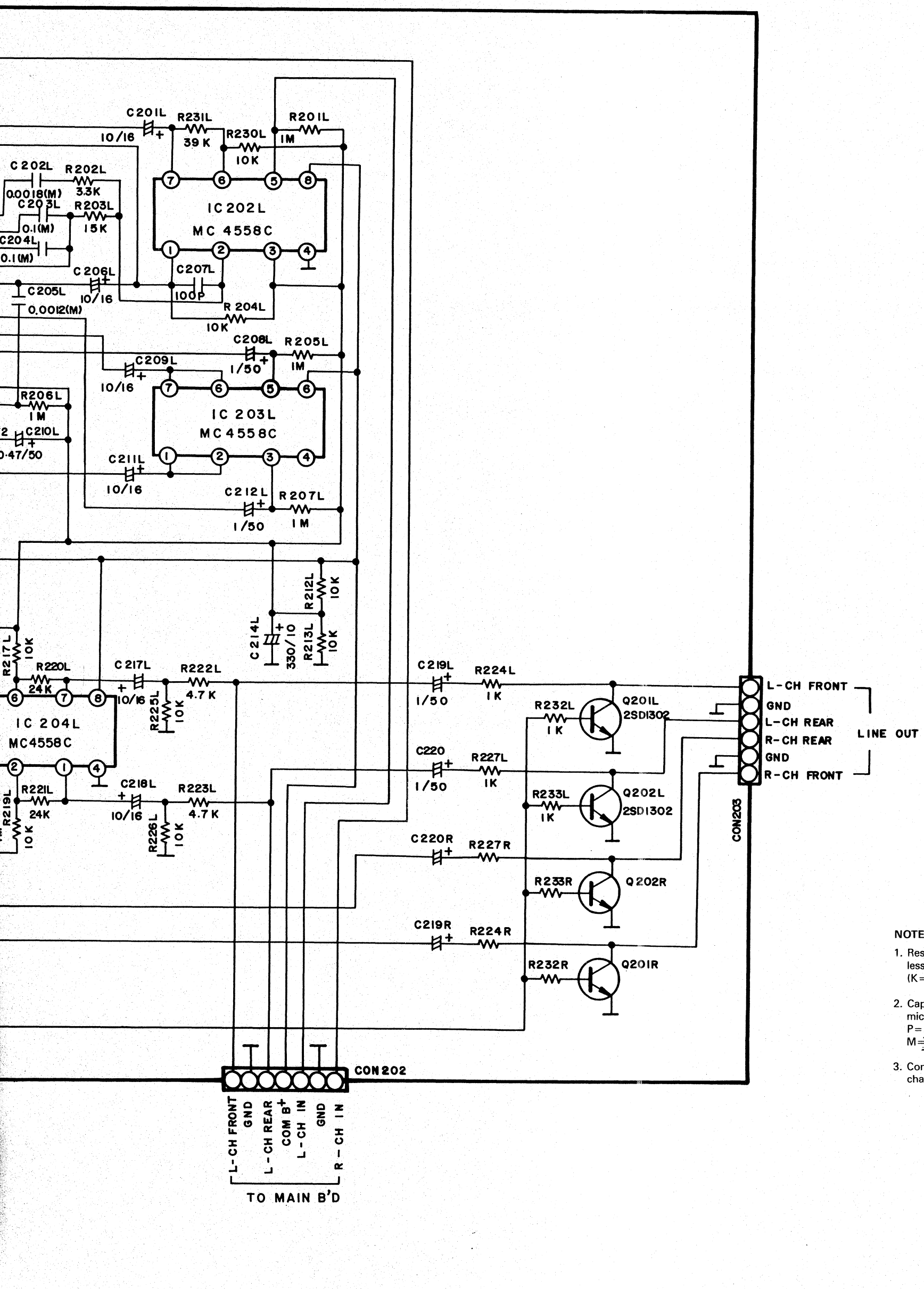
Schematic Diag

Model No.: XR-3

D E F G

ematic Diagram (I)

Model No.: XR-3813

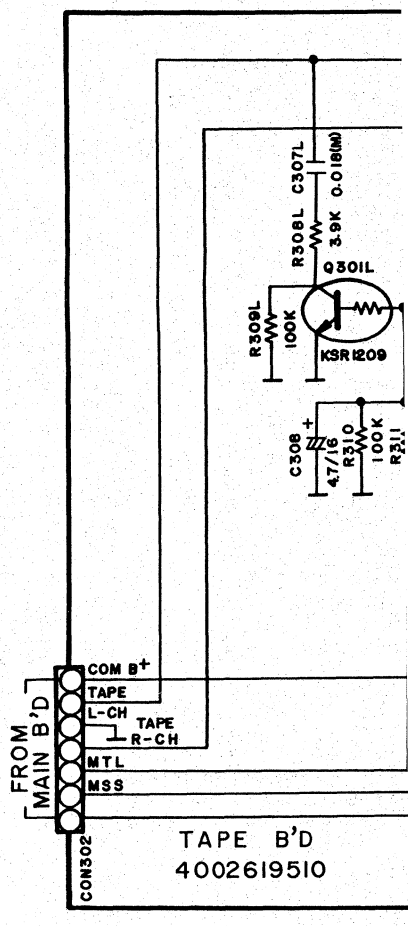


NOTES:

1. Resistance is indicated in ohms unless otherwise specified. (K=1,000 M=1,000,000)
2. Capacitance values are shown in microfarads unless otherwise noted. P=Pico-farad=Micro-Microfarad, M=Mylar Capacitor
3. Component values are subject to change without notice.

Schematic Diagra

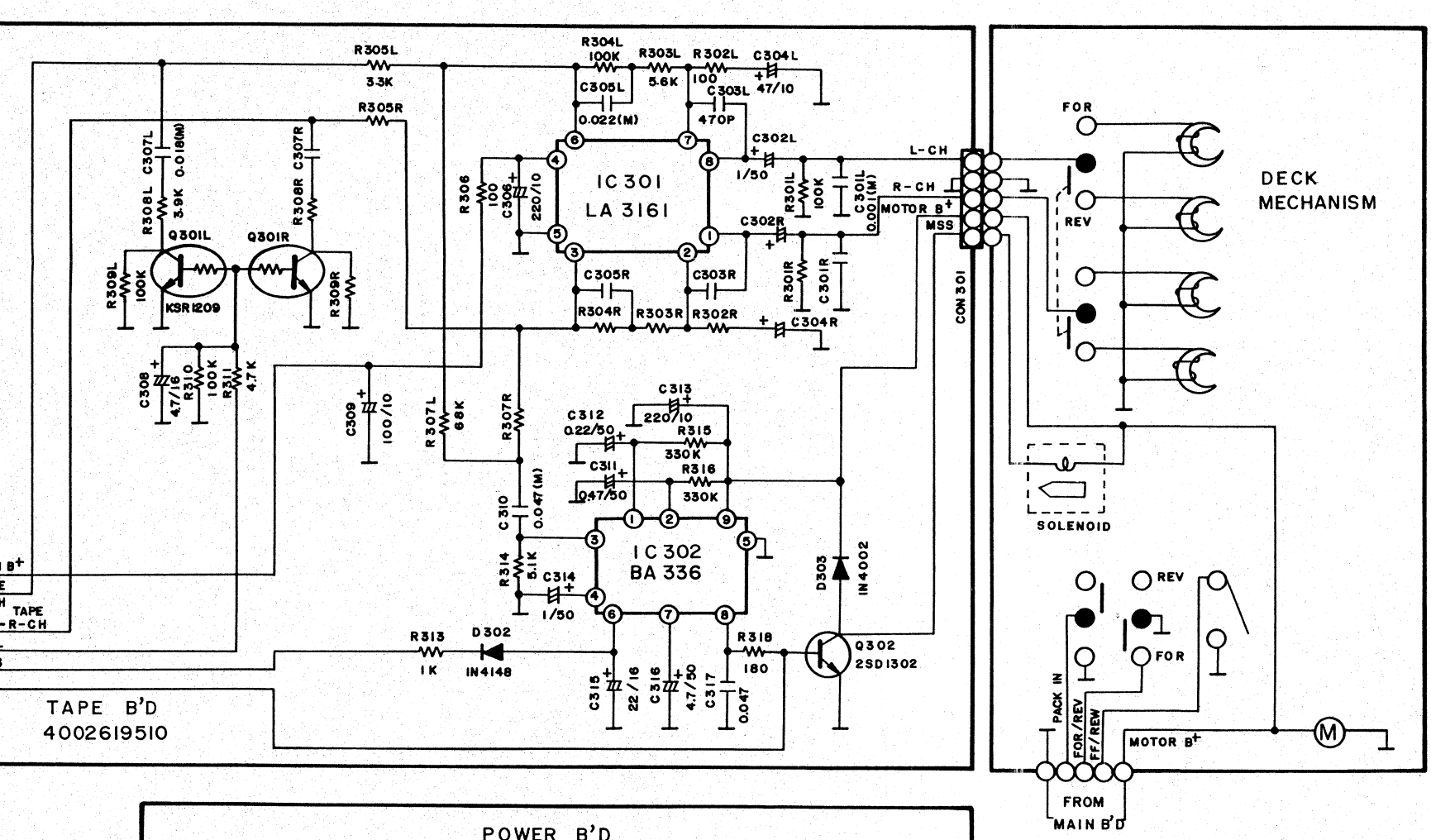
Model No.: XR-381

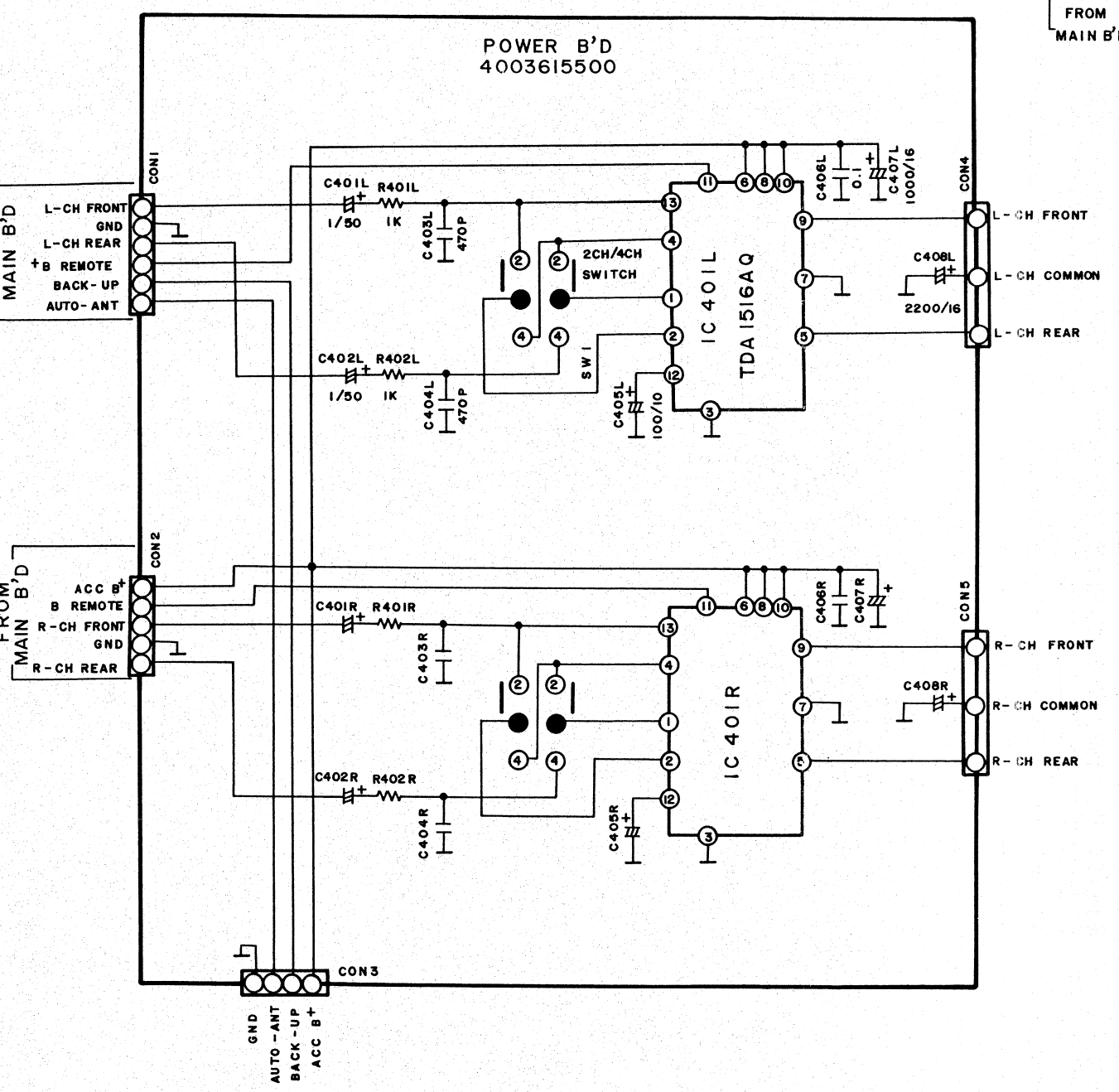


D E F G

matic Diagram (II)

odel No.: XR-3813





NOTES:

1. Resistance is indicated in ohms unless otherwise specified. (K=1,000 M=1,000,000)
2. Capacitance values are shown in microfarads unless otherwise noted. P=Pico-farad=Micro-Microfarad, M=Mylar Capacitor
3. Component values are subject to change without notice.

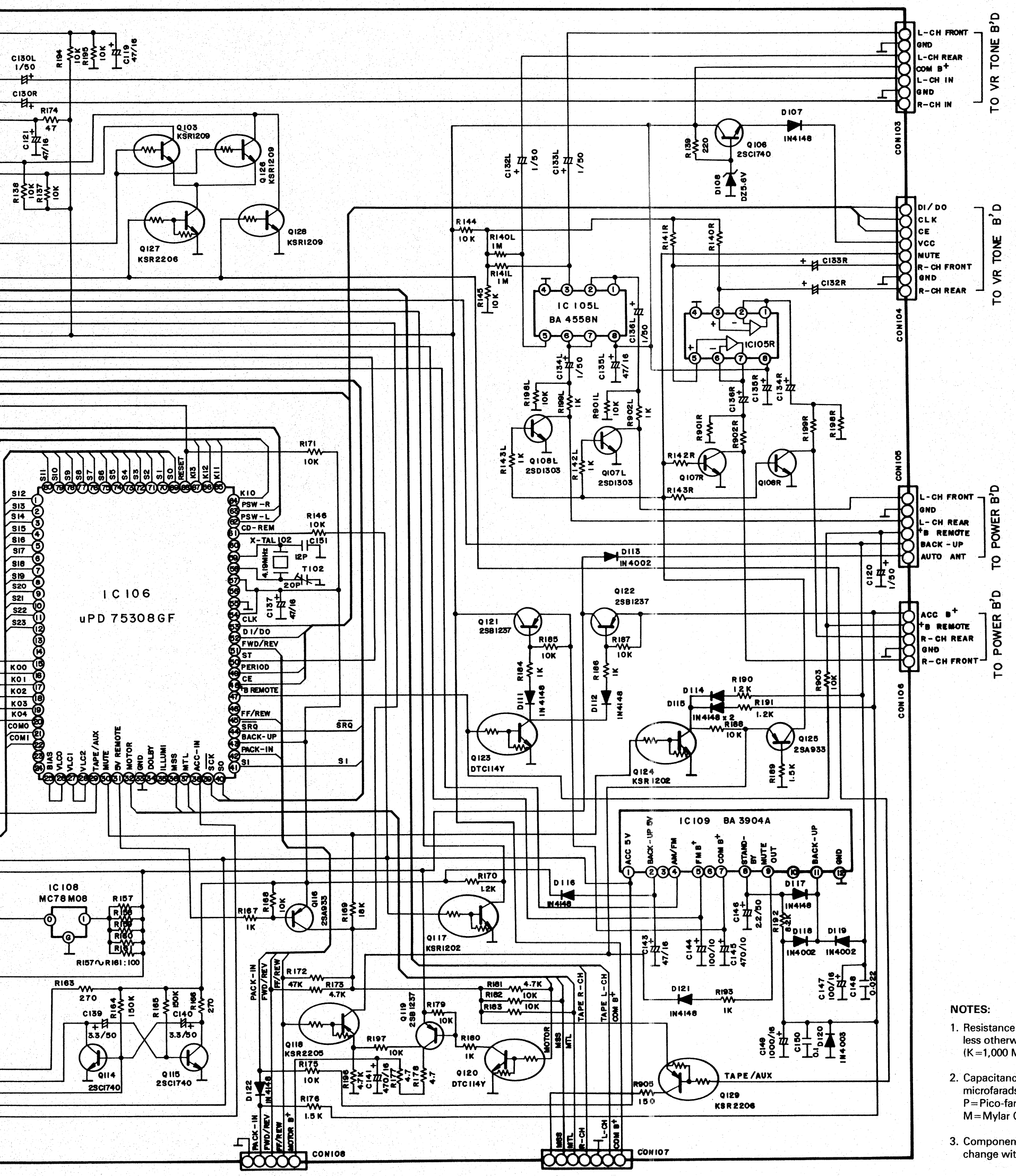
Schematic Diag

Model No.: XR-

D E F G

Schematic Diagram (III)

Model No.: XR-3813



NOTES:

1. Resistance is indicated in ohms unless otherwise specified. (K=1,000 M=1,000,000)
2. Capacitance values are shown in microfarads unless otherwise noted. P=Pico-farad=Micro-Microfarad, M=Mylar Capacitor
3. Component values are subject to change without notice.

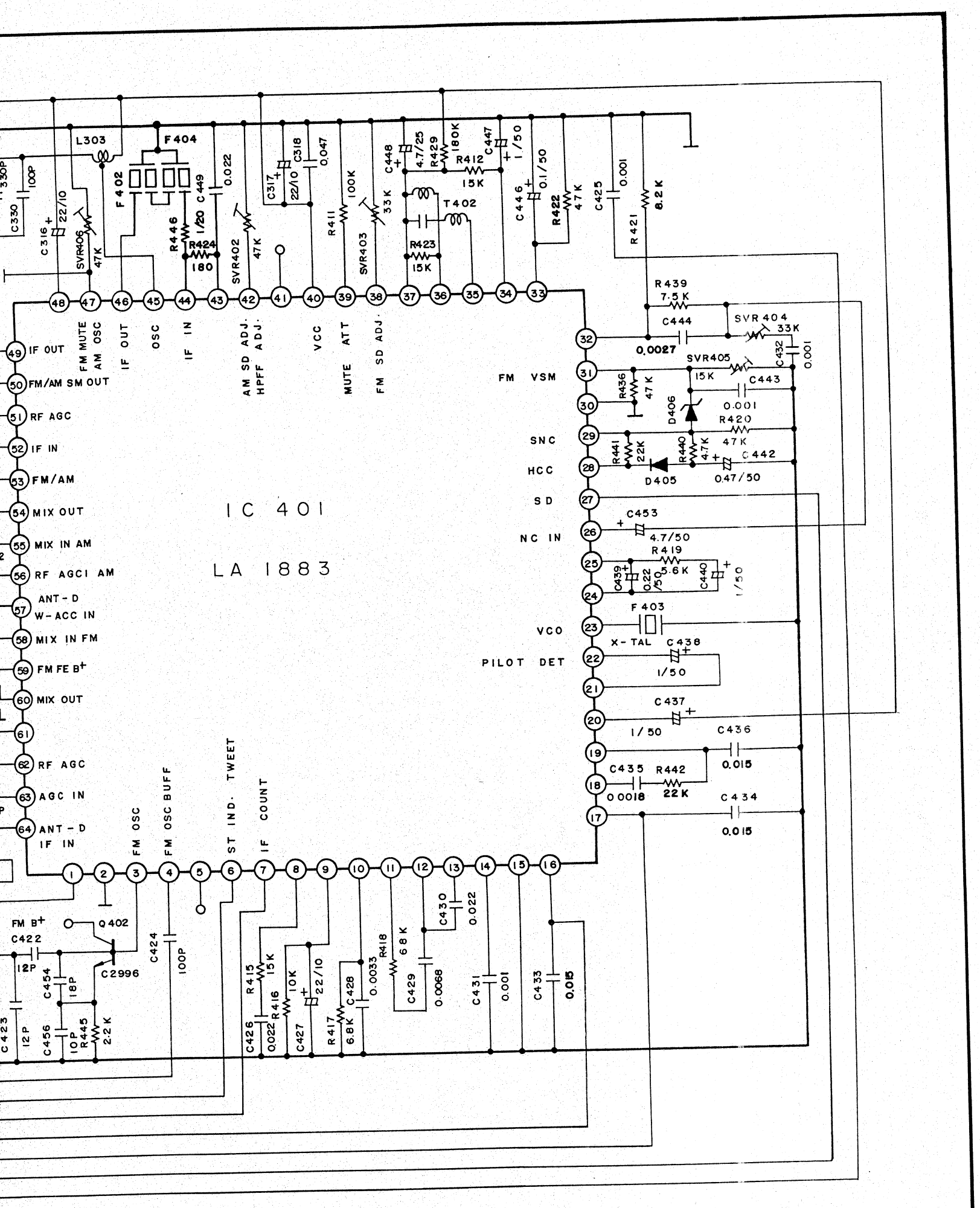
Schematic Diagr

Model No.: XR-38

D E F G

atic Diagram (IV)

del No.: XR-3813



NOTES:

1. Resistance is indicated in ohms unless otherwise specified. (K=1,000 M=1,000,000)
2. Capacitance values are shown in microfarads unless otherwise noted. P=Pico-farad=Micro-Microfarad, M=Mylar Capacitor
3. Component values are subject to change without notice.